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FULL ESTIMATED COST

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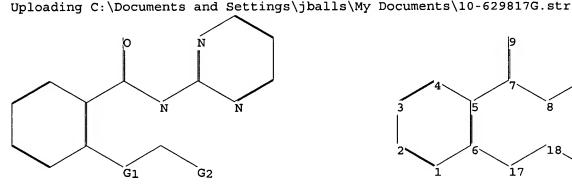
The CA roles and document type information have been removed from * the IDE default display format and the ED field has been added, * effective March 20, 2005. A new display format, IDERL, is now available and contains the CA role and document type information. ***********

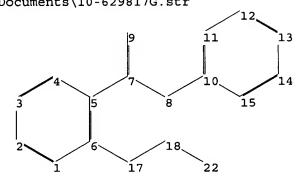
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119

212

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Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 17:CLASS 18:CLASS 19:CLASS 20:Atom 21:Atom 22:CLASS

L1 STRUCTURE UPLOADED

=> s l1 sub sam

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SAMPLE SCREEN SEARCH COMPLETED - 18 TO ITERATE

100.0% PROCESSED 18 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 106 TO 614
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> file caplus

COST IN U.S. DOLLARS
SINCE FILE TOTAL
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REGISTRY INITIATED

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SEARCH TIME: 00.00.01

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PROJECTED ITERATIONS: 106 TO 614

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L5 0 SEA SSS SAM L1

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Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

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SEARCH TIME: 00.00.01

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L8 5 L7

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DN
     133:89437
     Preparation of heteroaryl-substituted aromatic amides as factor Xa
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     ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
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ACCESSION NUMBER:
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DOCUMENT NUMBER:
                        Entered STN: 07 Jul 2000
ENTRY DATE:
                        Preparation of heteroaryl-substituted aromatic amides
TITLE:
                        as factor Xa inhibitors
                        Beight, Douglas Wade; Craft, Trelia Joyce; Denny, Carl
INVENTOR(S):
                        Penman; Franciskovich, Jeffry Bernard; Goodson,
                        Theodore, Jr.; Hall, Steven Edward; Herron, David
                        Kent; Joseph, Sajan Pariyadan; Klimkowski, Valentine
                        Joseph; Masters, John Joseph; Mendel, David; Milot,
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Eli Lilly and Co., USA; Kyle, Jeffrey, Alan; et al.
PATENT ASSIGNEE(S):
SOURCE:
                         PCT Int. Appl., 403 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:
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LANGUAGE:
                         English
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                         27-16 (Heterocyclic Compounds (One Hetero Atom))
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                         Section cross-reference(s): 1, 28, 63
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MARPAT 133:89437
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OTHER SOURCE(S): GRAPHIC IMAGE:

ABSTRACT:

The title compds. [I; A3-A6, together with the two carbons to which they are attached, complete a substituted benzene in which A3 = CR3, A4 = CR4, A5 = CR5, and A6 = CR6 (wherein R3 = H, Me, MeO, etc.; one of R4 and R5 = H, alkyl, halo, etc.; the other of R4 and R5 = H; R6 = H, Me, F, etc.); L1 = CONH; Q1 = 2-pyridinyl (un)substituted at the 5-position, 3-pyridinyl (un)substituted at the 6-position, 2-pyrimidinyl (un)substituted at the 5-position, etc.; R2 = L2Q2 (L2 = NHCO, NHCH2, OCH2, etc.; Q2 = (un)substituted piperidinyl, piperazinyl, Ph, etc.)] and their pharmaceutically acceptable salts, useful as inhibitors of factor Xa (no data), were prepared and formulated. E.g., a multi-step synthesis of II.HCl was given. In general, compds. I are effective at 0.01-1000 mg/kg/day.

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SUPPL. TERM: arom amide heteroaryl prepn formulation factor Xa inhibitor
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anticoagulant

INDEX TERM: Anticoagulants

(preparation of heteroaryl-substituted aromatic amides as factor

Xa inhibitors)

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ROLE: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation of heteroaryl-substituted aromatic amides as factor Xa inhibitors)

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(preparation of heteroaryl-substituted aromatic amides as factor
                      Xa inhibitors)
INDEX TERM:
                   280774-00-7P
                                  280774-01-8P
                                                  280774-02-9P
                                                                 280774-03-0P
                   280774-04-1P
                                  280774-05-2P
                                                  280774-06-3P
                                                                 280774-07-4P
                                  280774-09-6P
                                                  280774-15-4P
                   280774-08-5P
                   ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP
                   (Preparation); RACT (Reactant or reagent)
                      (preparation of heteroaryl-substituted aromatic amides as factor
                      Xa inhibitors)
                         THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS
REFERENCE COUNT:
                         RECORD.
                   (1) Beight Douglas Wade; WO 9900121 A 1999 CAPLUS
REFERENCE(S):
                   (2) Beight Douglas Wade; WO 9900128 A 1999 CAPLUS
                   (3) Berlex Lab; WO 9628427 A 1996 CAPLUS
                   (4) Katakura; EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY
                             CHIMICA THERAPEUTICA 1995, V30(5), P387 CAPLUS
                   (5) Kunitada, S; CURRENT PHARMACEUTICAL DESIGN 1996, V2(5),
                   (6) Schering Ag; WO 9932477 A 1999 CAPLUS
=> d ibib abs 1
     ANSWER 1 OF 5
                    CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:
                         2000:457059 CAPLUS
DOCUMENT NUMBER:
                         133:89437
TITLE:
                         Preparation of heteroaryl-substituted aromatic amides
                         as factor Xa inhibitors
```

 Γ 8

Beight, Douglas Wade; Craft, Trelia Joyce; Denny, Carl INVENTOR(S):

Penman; Franciskovich, Jeffry Bernard; Goodson, Theodore, Jr.; Hall, Steven Edward; Herron, David Kent; Joseph, Sajan Pariyadan; Klimkowski, Valentine Joseph; Masters, John Joseph; Mendel, David; Milot, Guy; Pineiro-Nunez, Marta Maria; Sawyer, Jason Scott; Shuman, Robert Theodore; Smith, Gerald Floyd; Tebbe, Anne Louise; Tinsley, Jennifer Marie; Weir, Leonard Crayton; Wikel, James Howard; Wiley, Michael Robert;

Yee, Ying Kwong

Eli Lilly and Co., USA; Kyle, Jeffrey, Alan; et al. PATENT ASSIGNEE(S):

SOURCE: PCT Int. Appl., 403 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO. | | | KIND DATE | | | | APPLICATION NO. | | | DATE | | | | | | | |
|------------|-------|------|-----------|-----|-----|-----|-----------------|------|---------|------|--------|-------|-----|-----|-----|-------|-----|
| | | | | | | | | | | | | | | | | | |
| WO | 2000 | 0391 | 18 | | A1 | | 2000 | 0706 | • | WO 1 | L999-1 | US29: | 946 | | 1 | 9991: | 215 |
| | W: | ΑE, | AL, | AM, | AT, | AU, | ΑZ, | BA, | BB, | BG, | BR, | BY, | CA, | CH, | CN, | CR, | CU, |
| | | CZ, | DE, | DK, | DM, | EE, | ES, | FI, | GB, | GD, | GE, | GH, | GM, | HR, | HU, | ID, | IL, |
| | | IN, | IS, | JP, | KE, | KG, | ΚP, | KR, | KZ, | LC, | LK, | LR, | LS, | LT, | LU, | LV, | MA, |
| | | MD, | MG, | MK, | MN, | MW, | MX, | NO, | NZ, | PL, | PT, | RO, | RU, | SD, | SE, | SG, | SI, |
| | | SK, | SL, | TJ, | TM, | TR, | TT, | TZ, | UA, | UG, | , US, | UΖ, | VN, | YU, | ZA, | ZW | |
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| | | DK, | ES, | FI, | FR, | GB, | GR, | ΙE, | IT, | LU, | MC, | NL, | PT, | SE, | BF, | ВJ, | CF, |
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| CA | 2361 | 149 | | | AA | | 2000 | 0706 | | CA 1 | L999- | 2361 | 149 | | 1 | 9991: | 215 |
| EP | 1140 | 903 | | | Al | | 2001 | 1010 | | EP 3 | 1999- | 9642 | 79 | | 1 | 9991: | 215 |
| EP | 1140 | 903 | | | B1 | | 2004 | 0804 | | | | | | | | | |
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| | | | | | LV, | | | | | | | | | | | | |
| JP | 2002 | 5334 | 54 | | T2 | | 2002 | 1008 | , | JP 2 | 2000- | 5910: | 29 | | 1 | 9991: | 215 |
| | 2726 | | | | | | 2004 | 0815 | | | L999- | | | | _ | | |
| ES | 2226 | 485 | | | Т3 | | 2005 | 0316 | | - | L999- | | | | | | |
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| US | 2004 | 0298 | 74 | | Al | | 2004 | 0212 | | US 2 | 2003 - | 6297 | 60 | | 2 | 0030 | 729 |
| US | 6759 | 414 | | | B2 | | 2004 | | | | | | | | | | |
| US | 2005 | 2828 | 62 | | A1 | | 2005 | 1222 | , | US 2 | 2003- | 6298 | 17 | | 2 | 0030 | 729 |
| PRIORIT | Y APP | LN. | INFO | .: | | | | | | US 1 | L998- | 1135 | 56P | | P 1 | 9981 | 223 |

OTHER SOURCE(S):

MARPAT 133:89437

GI

The title compds. [I; A3-A6, together with the two carbons to which they AR are attached, complete a substituted benzene in which A3 = CR3, A4 = CR4, A5 = CR5, and A6 = CR6 (wherein R3 = H, Me, MeO, etc.; one of R4 and R5 =H, alkyl, halo, etc.; the other of R4 and R5 = H; R6 = H, Me, F, etc.); L1= CONH; Q1 = 2-pyridinyl (un) substituted at the 5-position, 3-pyridinyl (un) substituted at the 6-position, 2-pyrimidinyl (un) substituted at the 5-position, etc.; R2 = L2Q2 (L2 = NHCO, NHCH2, OCH2, etc.; <math>Q2 =(un) substituted piperidinyl, piperazinyl, Ph, etc.)] and their pharmaceutically acceptable salts, useful as inhibitors of factor Xa (no data), were prepared and formulated. E.g., a multi-step synthesis of II.HCl was given. In general, compds. I are effective at 0.01-1000 mg/kg/day. THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS REFERENCE COUNT: 6 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

L3

L4

L6

L7

(FILE 'HOME' ENTERED AT 14:09:38 ON 14 FEB 2006)

FILE 'REGISTRY' ENTERED AT 14:09:53 ON 14 FEB 2006

STRUCTURE UPLOADED 1.1

L20 S L1

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FILE 'REGISTRY' ENTERED AT 14:11:39 ON 14 FEB 2006 0 S L1 SAM

FILE 'CAPLUS' ENTERED AT 14:11:39 ON 14 FEB 2006

0 S L3 SAM S L1

FILE 'REGISTRY' ENTERED AT 14:12:03 ON 14 FEB 2006

L5

FILE 'CAPLUS' ENTERED AT 14:12:03 ON 14 FEB 2006

0 S L5 S L1

FILE 'REGISTRY' ENTERED AT 14:12:25 ON 14 FEB 2006 7 S L1 FULL

FILE 'CAPLUS' ENTERED AT 14:12:26 ON 14 FEB 2006 5 S L7 FULL L8

=> d 18 ibib abs

ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2000:457059 CAPLUS

DOCUMENT NUMBER:

133:89437

Preparation of heteroaryl-substituted aromatic amides TITLE:

as factor Xa inhibitors

INVENTOR(S):

Beight, Douglas Wade; Craft, Trelia Joyce; Denny, Carl Penman; Franciskovich, Jeffry Bernard; Goodson, Theodore, Jr.; Hall, Steven Edward; Herron, David Kent; Joseph, Sajan Pariyadan; Klimkowski, Valentine Joseph; Masters, John Joseph; Mendel, David; Milot, Guy; Pineiro-Nunez, Marta Maria; Sawyer, Jason Scott; Shuman, Robert Theodore; Smith, Gerald Floyd; Tebbe, Anne Louise; Tinsley, Jennifer Marie; Weir, Leonard Crayton; Wikel, James Howard; Wiley, Michael Robert; Yee, Ying Kwong

PATENT ASSIGNEE(S): SOURCE:

Eli Lilly and Co., USA; Kyle, Jeffrey, Alan; et al. PCT Int. Appl., 403 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

1

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| | | | | | | | DATE | | | | LICAT | | | | | ATE | |
|----------|------|------|------|-----|-----|-----|-------|------|-----|----|--------|-------|-----|-----|----------|--------|-----|
| | | | | | | | | | | | 1999- | | | | | 19991 | 215 |
| | | | | | | | | | | | BR, | | | | | | |
| | | CZ, | DE, | DK, | DM, | EE, | , ES, | FI, | GB, | GD |), GE, | GH, | GM, | HR, | HU, | ID, | IL, |
| | | IN, | IS, | JP, | KE, | KG, | KP, | KR, | KZ, | LC | , LK, | LR, | LS, | LT, | LU | LV, | MA, |
| | | MD, | MG, | MK, | MN, | MW | , MX, | NO, | NZ, | PL | , PT, | RO, | RU, | SD, | SE | SG, | SI, |
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| EP | 1140 | 903 | | | A1 | | 2001 | 1010 | | ΕP | 1999- | 9642 | 79 | | 1 | 19991 | 215 |
| EP | 1140 | 903 | | | B1 | | 2004 | 0804 | | | | | | | | | |
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| | | • | • | • | • | | , RO | | | | | | | | | | |
| | | | | | | | | | | | 2000- | | | | | L9991: | 215 |
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| ES | 2226 | 485 | | | Т3 | | 2005 | 0316 | | ES | 1999- | 9642 | 79 | |] | 19991 | 215 |
| | 6635 | | | | | | | 1021 | | US | 2001- | 8577! | 51 | | 2 | 20010 | 608 |
| US | 2004 | 0298 | 74 | | A1 | | 2004 | 0212 | | US | 2003- | 6297 | 50 | | 2 | 20030 | 729 |
| | 6759 | | | | | | | | | | | | | | | | |
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| PRIORITY | APP | LN. | INFO | . : | | | | | | US | 1998- | 1135! | 56P |] | P : | .9981 | 223 |
| | | | | | | | | | | WO | 1999- | US29 | 946 | 1 | <i>1</i> | .9991 | 215 |
| | | | | | | | | | | US | 2001- | 8577 | 51 | 7 | A3 2 | 20010 | 608 |

OTHER SOURCE(S): GI

MARPAT 133:89437

The title compds. [I; A3-A6, together with the two carbons to which they AB are attached, complete a substituted benzene in which A3 = CR3, A4 = CR4, A5 = CR5, and A6 = CR6 (wherein R3 = H, Me, MeO, etc.; one of R4 and R5 =H, alkyl, halo, etc.; the other of R4 and R5 = H; R6 = H, Me, F, etc.); L1 = CONH; Q1 = 2-pyridinyl (un)substituted at the 5-position, 3-pyridinyl (un) substituted at the 6-position, 2-pyrimidinyl (un) substituted at the 5-position, etc.; R2 = L2Q2 (L2 = NHCO, NHCH2, OCH2, etc.; Q2 =(un) substituted piperidinyl, piperazinyl, Ph, etc.)] and their pharmaceutically acceptable salts, useful as inhibitors of factor Xa (no data), were prepared and formulated. E.g., a multi-step synthesis of II.HCl was given. In general, compds. I are effective at 0.01-1000 mg/kg/day.

```
6
REFERENCE COUNT:
=> 1
1 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
=> d his
     (FILE 'HOME' ENTERED AT 14:09:38 ON 14 FEB 2006)
     FILE 'REGISTRY' ENTERED AT 14:09:53 ON 14 FEB 2006
                STRUCTURE UPLOADED
1.1
L2
              0 S L1
     FILE 'CAPLUS' ENTERED AT 14:11:14 ON 14 FEB 2006
                S L1
     FILE 'REGISTRY' ENTERED AT 14:11:39 ON 14 FEB 2006
L3
              0 S L1 SAM
     FILE 'CAPLUS' ENTERED AT 14:11:39 ON 14 FEB 2006
              0 S L3 SAM
L4
                S L1
     FILE 'REGISTRY' ENTERED AT 14:12:03 ON 14 FEB 2006
              0 S L1
L5
     FILE 'CAPLUS' ENTERED AT 14:12:03 ON 14 FEB 2006
              0 S L5
L6
                S L1
     FILE 'REGISTRY' ENTERED AT 14:12:25 ON 14 FEB 2006
              7 S L1 FULL
L7
     FILE 'CAPLUS' ENTERED AT 14:12:26 ON 14 FEB 2006
              5 S L7 FULL
L8
=> d 17 ibib abs 1-7
YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:y
'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
'ABS' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
The following are valid formats:
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Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

SAM - Index Name, MF, and structure - no RN FIDE - All substance data, except sequence data - FIDE, but only 50 names IDE SQIDE - IDE, plus sequence data SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used - Protein sequence data, includes RN SOD SQD3 - Same as SQD, but 3-letter amino acid codes are used - Protein sequence name information, includes RN SON CALC - Table of calculated properties

EPROP - Table of experimental properties PROP - EPROP and CALC

REG

- RN

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats

must be cited first. The CA File predefined formats are: ABS -- Abstract APPS -- Application and Priority Information BIB -- CA Accession Number, plus Bibliographic Data CAN -- CA Accession Number CBIB -- CA Accession Number, plus Bibliographic Data (compressed) IND -- Index Data IPC -- International Patent Classification PATS -- PI, SO STD -- BIB, IPC, and NCL IABS -- ABS, indented, with text labels IBIB -- BIB, indented, with text labels ISTD -- STD format, indented OBIB ----- AN, plus Bibliographic Data (original) OIBIB ----- OBIB, indented with text labels SBIB ----- BIB, no citations SIBIB ----- IBIB, no citations The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available. The MAX format is the same as ALL. The IALL format is the same as ALL with BIB ABS and IND indented, with text labels. For additional information, please consult the following help messages: HELP DFIELDS -- To see a complete list of individual display fields. HELP FORMATS -- To see detailed descriptions of the predefined formats. ENTER DISPLAY FORMAT (IDE):ide ANSWER 1 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN L7 856975-07-0 REGISTRY RN Entered STN: 26 Jul 2005 ED Pyrimidine, 2-[2-(benzyloxy)-4-nitrobenzamido]-4,6-dimethyl- (5CI) CNINDEX NAME) 3D CONCORD FS C20 H18 N4 O4 MF CAS EARLY REGISTRATIONS SR STN Files: CA, CAPLUS Ph-CH2-Me

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

349622-99-7 REGISTRY

INDEX NAME)
3D CONCORD

C15 H16 N4 O2 Chemical Library

Entered STN: 01 Aug 2001

L7

RN

ED

CN

FS MF

SR

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Benzamide, 2-(acetylamino)-N-(4,6-dimethyl-2-pyrimidinyl)- (9CI) (CA

ANSWER 2 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

Supplier: MicroChemistry Ltd.

LC STN Files: CHEMCATS

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L7 ANSWER 3 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 280768-70-9 REGISTRY

ED Entered STN: 27 Jul 2000

CN 4-Piperidinecarboxamide, N-[2-[[(5-chloro-2-pyrimidinyl)amino]carbonyl]phe

nyl]-1-(4-pyridinyl)- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C22 H21 Cl N6 O2

SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L7 ANSWER 4 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 267891-53-2 REGISTRY

ED Entered STN: 02 Jun 2000

CN Benzamide, N-(5-chloro-2-quinazolinyl)-2-[(4-pyridinylmethyl)amino]- (9CI)

(CA INDEX NAME)

FS 3D CONCORD

MF C21 H16 Cl N5 O

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L7 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
- RN 267891-24-7 REGISTRY
- ED Entered STN: 02 Jun 2000
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 - (CA INDEX NAME)
- FS 3D CONCORD
- MF C17 H14 Cl N5 O
- SR CA
- LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L7 ANSWER 6 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
- RN 180206-29-5 REGISTRY
- ED Entered STN: 29 Aug 1996
- CN Benzamide, 2,3,4-tris(phenylmethoxy)-N-2-pyrimidinyl- (9CI) (CA INDEX
- NAME)
- FS 3D CONCORD
- MF C32 H27 N3 O4
- SR CA
- LC STN Files: CA, CAPLUS

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L7 ANSWER 7 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
- RN 69589-68-0 REGISTRY
- ED Entered STN: 16 Nov 1984
- CN Benzamide, 2-(benzoylamino)-N-2-pyrimidinyl- (9CI) (CA INDEX NAME)
- FS 3D CONCORD
- MF C18 H14 N4 O2
- LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT
 - (*File contains numerically searchable property data)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d his

L1

L3

L4

L5

L6

L8

(FILE 'HOME' ENTERED AT 14:09:38 ON 14 FEB 2006)

FILE 'REGISTRY' ENTERED AT 14:09:53 ON 14 FEB 2006

STRUCTURE UPLOADED

0 S L1 L2

> FILE 'CAPLUS' ENTERED AT 14:11:14 ON 14 FEB 2006 S L1

FILE 'REGISTRY' ENTERED AT 14:11:39 ON 14 FEB 2006 0 S L1 SAM

FILE 'CAPLUS' ENTERED AT 14:11:39 ON 14 FEB 2006

0 S L3 SAM

S L1

FILE 'REGISTRY' ENTERED AT 14:12:03 ON 14 FEB 2006

0 S L1

FILE 'CAPLUS' ENTERED AT 14:12:03 ON 14 FEB 2006

0 S L5

S L1

FILE 'REGISTRY' ENTERED AT 14:12:25 ON 14 FEB 2006 L7

7 S L1 FULL

FILE 'CAPLUS' ENTERED AT 14:12:26 ON 14 FEB 2006

5 S L7 FULL

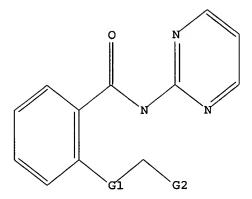
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FILE 'CAPLUS' ENTERED AT 14:14:57 ON 14 FEB 2006

=> d l1

L1 HAS NO ANSWERS

L1STR



G1 O, N G2 O, [@1], [@2]

Structure attributes must be viewed using STN Express query preparation.

=> logoff

ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF

LOGOFF? (Y)/N/HOLD:y

COST IN U.S. DOLLARS

SINCE FILE TOTAL
ENTRY SESSION

FULL ESTIMATED COST

0.46
196.02

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE
ENTRY
SESSION
CA SUBSCRIBER PRICE

0.00
-2.25

STN INTERNATIONAL LOGOFF AT 14:15:26 ON 14 FEB 2006

Connection closed by remote host

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSPTARJB1625

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America NEWS 2 "Ask CAS" for self-help around the clock

NEWS 3 DEC 05 CASREACT(R) - Over 10 million reactions available

NEWS 4 DEC 14 2006 MeSH terms loaded in MEDLINE/LMEDLINE

NEWS 5 DEC 14 2006 MeSH terms loaded for MEDLINE file segment of TOXCENTER

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NEWS 6 DEC 14 CA/Caplus to be enhanced with updated IPC codes
                 IPC search and display fields enhanced in CA/CAplus with the
NEWS 7 DEC 21
                 IPC reform
NEWS
      8
         DEC 23 New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/
                 USPAT2
                 IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
NEWS 9
         JAN 13
NEWS 10 JAN 13 New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to
                 INPADOC
NEWS 11 JAN 17 Pre-1988 INPI data added to MARPAT
NEWS 12 JAN 17 IPC 8 in the WPI family of databases including WPIFV
NEWS 13 JAN 30 Saved answer limit increased
NEWS 14 JAN 31 Monthly current-awareness alert (SDI) frequency
                 added to TULSA
              JANUARY 03 CURRENT VERSION FOR WINDOWS IS V8.01,
NEWS EXPRESS
              CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
              V8.0 USERS CAN OBTAIN THE UPGRADE TO V8.01 AT
              http://download.cas.org/express/v8.0-Discover/
              STN Operating Hours Plus Help Desk Availability
NEWS HOURS
              General Internet Information
NEWS INTER
              Welcome Banner and News Items
NEWS LOGIN
              Direct Dial and Telecommunication Network Access to STN
NEWS PHONE
              CAS World Wide Web Site (general information)
NEWS WWW
Enter NEWS followed by the item number or name to see news on that
 All use of STN is subject to the provisions of the STN Customer
```

specific topic.

agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

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=> file registry COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.42 0.42

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 14:37:27 ON 14 FEB 2006 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2006 American Chemical Society (ACS)

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13 FEB 2006 HIGHEST RN 874180-50-4 STRUCTURE FILE UPDATES: DICTIONARY FILE UPDATES: 13 FEB 2006 HIGHEST RN 874180-50-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

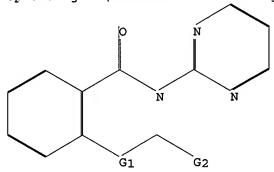
*********** The CA roles and document type information have been removed from * the IDE default display format and the ED field has been added, effective March 20, 2005. A new display format, IDERL, is now available and contains the CA role and document type information. ************ Structure search iteration limits have been increased. See HELP SLIMITS for details.

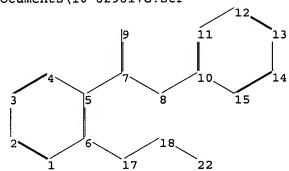
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

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Uploading C:\Documents and Settings\jballs\My Documents\10-629817G.str





cy²

119

212

chain nodes :

7 8 9 17 18 19 20 21 22

ring nodes :

1 2 3 4 5 6 10 11 12 13 14 15

chain bonds :

5-7 6-17 7-8 7-9 8-10 17-18 18-22 19-20

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 10-11 10-15 11-12 12-13 13-14 14-15

exact/norm bonds :

6-17 7-8 7-9 8-10 17-18 18-22 19-20

exact bonds :

5-7

normalized bonds :

 $1-2 \quad 1-6 \quad 2-3 \quad 3-4 \quad 4-5 \quad 5-6 \quad 10-11 \quad 10-15 \quad 11-12 \quad 12-13 \quad 13-14 \quad 14-15$

G1:0,N

G2:0,[*1],[*2]

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 17:CLASS 18:CLASS 19:CLASS 20:Atom 21:Atom 22:CLASS

L1 STRUCTURE UPLOADED

=> s 11

SAMPLE SEARCH INITIATED 14:38:03 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 18 TO ITERATE

100.0% PROCESSED SEARCH TIME: 00.00.01 18 ITERATIONS

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 106 TO 614
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> file CAPLUS

COST IN U.S. DOLLARS SINCE FILE TOTAL

ENTRY SESSION 0.44 0.86

FULL ESTIMATED COST 0.44 0.3

FILE 'CAPLUS' ENTERED AT 14:38:12 ON 14 FEB 2006 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 14 Feb 2006 VOL 144 ISS 8 FILE LAST UPDATED: 13 Feb 2006 (20060213/ED)

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http://www.cas.org/infopolicy.html

=> s 11

REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 14:38:17 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 18 TO ITERATE

100.0% PROCESSED 18 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 106 TO 614

PROJECTED ANSWERS: 0 TO 0

L3 0 SEA SSS SAM L1

.4 0 L3

=> s 11 full

REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 14:38:44 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 340 TO ITERATE

100.0% PROCESSED 340 ITERATIONS 7 ANSWERS

SEARCH TIME: 00.00.06

L5 7 SEA SSS FUL L1

L6 5 L5

=> d l5 all abs

YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:y

L5 ANSWER 1 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 856975-07-0 REGISTRY

ED Entered STN: 26 Jul 2005

CN Pyrimidine, 2-[2-(benzyloxy)-4-nitrobenzamido]-4,6-dimethyl- (5CI) (CA

INDEX NAME)

FS 3D CONCORD

MF C20 H18 N4 O4

SR CAS EARLY REGISTRATIONS

LC STN Files: CA, CAPLUS

DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: NORL (No role in record)

Ring System Data

| Elemental | Elemental | Size of | Ring System | Ring | RID |
|-----------|----------------|-----------|-------------|------------|------------|
| Analysis | Sequence | the Rings | Formula | Identifier | Occurrence |
| EA | ES | SZ | RF | RID | Count |
| ======= | ,
+======== | +=======- | | | +======= |
| C6 | C6 | 6 | | 46.150.18 | |
| C4N2 | NCNC3 | 6 | C4N2 | 46.195.39 | 1 |

$$\begin{array}{c|c} \text{Me} & \text{O} & \text{NO}_2 \\ \hline & \text{N} & \text{NH-C} \\ \hline & \text{Ph-CH}_2-\text{O} \\ \\ \text{Me} & \end{array}$$

Predicted Properties (PPROP)

| PROPERTY (CODE) | VALUE | CONDITION | • |
|---|------------|-----------|-------|
| ======================================= | +========= | +======== | +==== |
| Bioconc. Factor (BCF) | 4.89 | pH 1 | (1) |
| Bioconc. Factor (BCF) | 238 | pH 4 | (1) |
| Bioconc. Factor (BCF) | 248 | pH 7 | (1) |
| Bioconc. Factor (BCF) | 230 | PH 8 | (1) |
| Bioconc. Factor (BCF) | 25.6 | pH 10 | (1) |
| Freely Rotatable Bonds (FRB) | 7 | 1 | (1) |
| H acceptors (HAC) | 8 | | (1) |
| H donors (HD) | 1 | | (1) |

```
(1)
                               35.4
                                                |pH 1
Koc (KOC)
                                                pH 4
                                                              (1)
Koc (KOC)
                               1726
                                                pH 7
Koc (KOC)
                               1797
                                                              (1)
                                                8 Hq
Koc (KOC)
                               1666
                                                              (1)
                                                |pH 10
                                                              (1)
Koc (KOC)
                               185
logD (LOGD)
                                                pH 1
                                                              (1)
                               1.75
                                                |pH 4
                                                              (1)
                               3.44
logD (LOGD)
                                                |pH 7
                               3.45
logD (LOGD)
                                                              (1)
                                                8 Hq
logD (LOGD)
                               3.42
                                                              (1)
                               2.47
                                                pH 10
logD (LOGD)
                                                              (1)
logP (LOGP)
                               3.460 + / - 0.596
                                                              (1)
Molar Solubility (SLB.MOL)
                               0.00037 mol/L
                                                pH 1
                                                              (1)
Molar Solubility (SLB.MOL)
                               0.0000076 mol/L|pH 4
                                                              (1)
Molar Solubility (SLB.MOL)
                               0.0000073 mol/L|pH 7
                                                              (1)
Molar Solubility (SLB.MOL)
                               0.0000078 mol/L|pH 8
                                                              (1)
Molar Solubility (SLB.MOL)
                               0.000070 mol/L |pH 10
                                                              (1)
Molecular Weight (MW)
                               378.38
                                                              (1)
                               9.05 + / - 0.70
                                                 Most Acidic (1)
pKa (PKA)
                               2.70+/-0.17
                                                |Most Basic | (1)
pKa (PKA)
```

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V4.76 ((C) 1994-2006 ACD/Labs)

Tuberculostatic derivatives of p-aminobenzoic acid. III. Heterocyclic

See HELP PROPERTIES for information about property data sources in REGISTRY.

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

47:22216 CA

AN

ΤI

```
derivatives of 4-aminosalicylic acid
     Jensen, Kai Arne; Ingvorsen, Helmuth
ΑU
     Univ. Copenhagen
CS
     Acta Chemica Scandinavica (1952), 6, 161-5
SO
     CODEN: ACHSE7; ISSN: 0904-213X
DT
     Journal
     English
LΑ
     10 (Organic Chemistry)
CC
     cf. C.A. 43, 7454i. A number of heterocyclic derivs. of 4-nitro- (I) and
AB
     4-aminosalicylic acid (II) were prepared, including 4-nitro-
     salicylomorpholide (III), m. 247-8°, and -piperidide (IV), m.
     230-2°; 4-aminosalicylomorpholide (V), m. 161-2°, and
     -piperidide (VI), m. 134-5°; 2-benzyloxy-4-nitro-(VII), m.
     170° and 4-aminobenzoic acid (VIII), m. 160°;
     2-benzyloxy-4-nitrobenzoyl chloride (IX), m. 122°, -benzamide (X),
     m. 178°, and -benzanilide (XI), m. 201°;
     4-amino-salicylanilide (XII), m. 143°; 2-(2-benzyloxy-4'-
     nitrobenzamido)pyridine (XIII), m. 144°, -thiazole (XIV), m.
     201° -5-methyl-1,3,4-thiadiazole (XV), m. 196°, and
     -4,6-dimethylpyrimidine (XVI), m. 206°; and 2-(2-benzyloxy-4-
     aminobenzamido)pyridine (XVII), m. 183°, -thiazole (XVIII), m.
     214-15°, and -5-methyl-1,3,4-thiazole (XIX), m. 110-11°. Et
     4-nitrosalicylate (3 g.) and 3 g. morpholine (XX) were heated 5 h. at
     120°, the excess XX removed at 100° in vacuo, the residue
     dissolved in hot H2O, acidified with HOAc, and the solution cooled, giving
     50% III. IV was similarly prepared III (0.5 g.) hydrogenated with 0.01 g.
     PtO2 in 25 cc. EtOH, all of the EtOH removed in vacuo, and fractional
     crystallization of the residue from petr. ether gave 0.2 g.V. VI was similarly
     prepared I (50 g.), 35 g. PhCH2Cl, and 50 cc. 20% NaOH in 100 cc. EtOH were
     refluxed until colorless, 0.2 N NaOH added until the color reappeared, the
     EtOH distilled, H2O added, and dilute HCl added to complete the precipitation of VII
     (40 g.). VII hydrogenated over PtO2 with the amount of H calculated for reduction
     of the NO2 gave VIII. VII (10 g.) and 10 cc. SOCl2 were refluxed 1-1.5
     h., the excess SOC12 was removed in vacuo, and the IX (9.2 g.) treated
     with C and recrystd. from C6H6; 2 g. IX and 10 cc. cold, concentrated aqueous NH3 in
     30 cc. H2O neutralized with HOAc gave 1.3 g. X (from 90% EtOH). IX (2.9
     g.), 1 g. PhNH2, and 5 cc. pyridine were cooled and the mixture poured into
     300 cc. H2O, giving 2.2 g. XI (from HOAc). XI hydrogenated in EtOH, the
```

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solution filtered, part of the EtOH removed in vacuo, H2O added, the solution
heated, charcoal added, and the hot solution filtered gave XII. XIII to XVI
were prepared like VII, in 2.2, 2.7, 1.7, and 1.7 g. yields, resp., from 2.9 \,
g. acid chloride. XVII to XIX were obtained by hydrogenation of the
corresponding nitro compds. over PtO2 in EtOH. Hydrogenation of the nitro
compds. at 100° and 150 atmospheric gave the corresponding azoxy compds.
Heterocyclic compounds
Heterocyclic compounds
Heterocyclic compounds
Heterocyclic compounds
Salicylamide, 4-nitro-N-2-pyridyl-
Salicylamide, N-(5-methyl-1,3,4-thiadiazol-2-yl)-4-nitro-
Salicylanilide, 4-nitro-4'-sulfamoyl-
65-49-6, Salicylic acid, 4-amino-
                                   150-13-0, Benzoic acid, p-amino-
   (derivs.)
                                                 6935-15-5, Salicylic
5340-21-6, Benzoic acid, 2-(benzyloxy)-4-nitro-
acid, 4-carboxyamino-, 4-benzyl ester 39614-82-9, Salicyloyl chloride, 4-nitro- 78154-65-1, Salicylanilide, 4-amino- 78154-68-4, Morpholine
                                                  78154-68-4, Morpholine,
4-(4-nitrosalicyloyl)-
                         78154-68-4, Phenol, 2-morpholinocarbonyl-5-nitro-
   78154-69-5, Piperidine, 1-(4-nitrosalicyloyl)-
                                                    78154-69-5, Phenol,
5-nitro-2-piperidinocarbonyl- 78154-70-8, Morpholine,
                         78154-71-9, Phenol, 5-amino-2-piperidinocarbonyl-
4-(4-aminosalicyloyl)-
   78154-71-9, Piperidine, 1-(4-aminosalicyloyl)-
                                                    99072-94-3,
Salicylamide, 4-amino-N-(5-methyl-1,3,4-thiadiazol-2-yl)-
                                                             99185-78-1,
Salicylamide, 4-amino-N-2-thiazolyl- 99989-22-7, Salicylamide,
4-amino-N-2-pyridyl-
                      100872-84-2, Benzamide, 2-(benzyloxy)-4-nitro-
106952-12-9, Salicylanilide, 4',4'''-sulfonylbis[4-amino- 109016-83-3,
Salicylanilide, 4-amino-4'-sulfamoyl-
                                        193803-83-7, Benzoic acid,
4-amino-2-(benzyloxy)-
                        607713-82-6, Benzoyl chloride,
                         721920-30-5, 5-Thiazolecarboxylic acid,
2-(benzyloxy)-4-nitro-
4-methyl-2-(4-nitrosalicylamido)-, ethyl ester 850852-03-8, Thiazole,
2-[2-(benzyloxy)-4-nitrobenzamido]-
                                      856848-98-1, Pyridine,
2-[2-(benzyloxy)-4-nitrobenzamido]- 856861-93-3, Salicylamide,
                            856975-07-0, Pyrimidine, 2-[2-(benzyloxy)-4-
4-nitro-N-s-triazol-3-yl-
nitrobenzamido] -4,6-dimethyl-
                                857533-50-7, Benzanilide,
4-amino-2-(benzyloxy)-
                        857534-05-5, Benzanilide, 2-(benzyloxy)-4-nitro-
857748-51-7, 1,3,4-Thiadiazole, 2-[4-amino-2-(benzyloxy)benzamido]-5-
          857748-52-8, 1,3,4-Thiadiazole, 2-[2-(benzyloxy)-4-
                            857749-06-5, 1,3,4-Thiadiazole,
nitrobenzamido]-5-methyl-
2-methyl-5-[N4-(4-nitrosalicyloyl)sulfanilamido]-
                                                    857749-06-5,
Salicylanilide, 4'-[(5-methyl-1,3,4-thiadiazol-2-yl)sulfamoyl]-4-nitro-
857756-40-2, Salicylamide, N-(4,5-dimethyl-2-thiazolyl)-4-nitro-
48-0, Salicylamide, 4-nitro-N-p-sulfamoylbenzyl- 857756-83-3,
Salicylanilide, 4-amino-4'-(2-thiazolylsulfamoyl)-
                                                      857757-02-9,
Salicylanilide, 4'-[(4-methyl-2-pyrimidinyl)sulfamoyl]-4-nitro-
2-9, Pyrimidine, 4-methyl-2-[N4-(4-nitrosalicyloyl)sulfanilamido]-
                                                                   857757-0
857757-06-3, Salicylanilide, 4-nitro-4'-(2-thiazolylsulfamoyl)-
6-3, Thiazole, 2-[N4-(4-nitrosalicyloyl)sulfanilamido]-
                                                           858479-10-4,
Salicylamide, 4-nitro-N-2-thiazolyl- 858479-45-5, Salicylamide,
4-amino-N-p-sulfamoylbenzyl-
                               858479-46-6, Salicylanilide,
4-nitro-4'-(2-pyrimidinylsulfamoyl)-
                                      858479-47-7, Salicylanilide,
4-nitro-4'-(2-pyridylsulfamoyl)- 858479-65-9, Salicylanilide,
4-amino-4'-[(5-methyl-1,3,4-thiadiazol-2-yl)sulfamoyl]-
                                                          858479-65-9,
1,3,4-Thiadiazole, 2-[N4-(4-aminosalicyloy1)sulfanilamido]-5-methyl-
                                                              860507-31-9,
859466-83-4, Thiazole, 2-[4-amino-2-(benzyloxy)benzamido]-
                                                       860507-36-4,
Salicylamide, 4-amino-N-(4,5-dimethyl-2-thiazolyl)-
                                               867131-41-7, Pyridine,
Salicylanilide, 4',4'''-sulfonylbis[4-nitro-
                                     873401-46-8, 1,3,4-Thiadiazole,
2-[4-amino-2-(benzyloxy)benzamido]-
2-methyl-5-(4-nitrosalicylamido)-
   (preparation of)
cf. C.A. 43, 7454i. A number of heterocyclic derivs. of 4-nitro- (I) and
4-aminosalicylic acid (II) were prepared, including 4-nitro-
salicylomorpholide (III), m. 247-8°, and -piperidide (IV), m.
230-2°; 4-aminosalicylomorpholide (V), m. 161-2°, and
-piperidide (VI), m. 134-5°; 2-benzyloxy-4-nitro-(VII), m.
170° and 4-aminobenzoic acid (VIII), m. 160°;
2-benzyloxy-4-nitrobenzoyl chloride (IX), m. 122°, -benzamide (X),
m. 178°, and -benzanilide (XI), m. 201°;
4-amino-salicylanilide (XII), m. 143°; 2-(2-benzyloxy-4'-
nitrobenzamido) pyridine (XIII), m. 144°, -thiazole (XIV), m.
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AB

201° -5-methyl-1,3,4-thiadiazole (XV), m. 196°, and -4,6-dimethylpyrimidine (XVI), m. 206°; and 2-(2-benzyloxy-4aminobenzamido)pyridine (XVII), m. 183°, -thiazole (XVIII), m. 214-15°, and -5-methyl-1,3,4-thiazole (XIX), m. 110-11°. Et 4-nitrosalicylate (3 g.) and 3 g. morpholine (XX) were heated 5 h. at 120°, the excess XX removed at 100° in vacuo, the residue dissolved in hot H2O, acidified with HOAc, and the solution cooled, giving 50% III. IV was similarly prepared III (0.5 g.) hydrogenated with 0.01 g. PtO2 in 25 cc. EtOH, all of the EtOH removed in vacuo, and fractional crystallization of the residue from petr. ether gave 0.2 g.V. VI was similarly prepared I (50 g.), 35 g. PhCH2Cl, and 50 cc. 20% NaOH in 100 cc. EtOH were refluxed until colorless, 0.2 N NaOH added until the color reappeared, the EtOH distilled, H2O added, and dilute HCl added to complete the precipitation of VII (40 g.). VII hydrogenated over PtO2 with the amount of H calculated for reduction of the NO2 gave VIII. VII (10 g.) and 10 cc. SOC12 were refluxed 1-1.5 h., the excess SOC12 was removed in vacuo, and the IX (9.2 g.) treated with C and recrystd. from C6H6; 2 g. IX and 10 cc. cold, concentrated aqueous NH3 in 30 cc. H2O neutralized with HOAc gave 1.3 g. X (from 90% EtOH). IX (2.9 g.), 1 g. PhNH2, and 5 cc. pyridine were cooled and the mixture poured into 300 cc. H2O, giving 2.2 g. XI (from HOAc). XI hydrogenated in EtOH, the solution filtered, part of the EtOH removed in vacuo, H2O added, the solution heated, charcoal added, and the hot solution filtered gave XII. XIII to XVI were prepared like VII, in 2.2, 2.7, 1.7, and 1.7 g. yields, resp., from 2.9 q. acid chloride. XVII to XIX were obtained by hydrogenation of the corresponding nitro compds. over PtO2 in EtOH. Hydrogenation of the nitro compds. at 100° and 150 atmospheric gave the corresponding azoxy compds.

=> s l1 full 2

REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 14:39:39 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 18 TO ITERATE

100.0% PROCESSED 18 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 106 TO 614
PROJECTED ANSWERS: 0 TO 0

L7 0 SEA SSS SAM L1

L8 0 L7

MISSING OPERATOR L8 FULL

The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

SAT ---- Structure ATtributes and map table if it contains data.

SCT ---- Structure Connection Table and map table if it contains data.

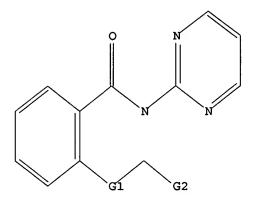
SDA ---- All Structure DAta (image, attributes, connection table and

map table if it contains data).

NOS ----- NO Structure data.

ENTER STRUCTURE FORMAT (SIM), NOS:sim

L1 STR



Cy Cy

G1 O, N G2 O, [@1], [@2]

Structure attributes must be viewed using STN Express query preparation.

=> d 15 ibib abs 1-7
YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:y

'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY' 'ABS' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN

SAM - Index Name, MF, and structure - no RN FIDE - All substance data, except sequence data

IDE - FIDE, but only 50 names SQIDE - IDE, plus sequence data

SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used

SQD - Protein sequence data, includes RN

SQD3 - Same as SQD, but 3-letter amino acid codes are used

SQN - Protein sequence name information, includes RN

CALC - Table of calculated properties EPROP - Table of experimental properties

PROP - EPROP and CALC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract

APPS -- Application and Priority Information

BIB -- CA Accession Number, plus Bibliographic Data

```
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL
IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented
OBIB ----- AN, plus Bibliographic Data (original)
OIBIB ----- OBIB, indented with text labels
SBIB ----- BIB, no citations
SIBIB ----- IBIB, no citations
The ALL format gives FIDE BIB ABS IND RE, plus sequence data when
it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented,
with text labels.
For additional information, please consult the following help
messages:
HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):ide
     ANSWER 1 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
L5
RN
     856975-07-0 REGISTRY
     Entered STN: 26 Jul 2005
ED
     Pyrimidine, 2-[2-(benzyloxy)-4-nitrobenzamido]-4,6-dimethyl- (5CI)
CN
     INDEX NAME)
FS
     3D CONCORD
     C20 H18 N4 O4
MF
     CAS EARLY REGISTRATIONS
SR
                  CA, CAPLUS
     STN Files:
LC
            Ph-CH_2-O
      Me
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**
               1 REFERENCES IN FILE CA (1907 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
     ANSWER 2 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
L5
     349622-99-7 REGISTRY
RN
     Entered STN: 01 Aug 2001
ED
     Benzamide, 2-(acetylamino)-N-(4,6-dimethyl-2-pyrimidinyl)- (9CI) (CA
CN
     INDEX NAME)
     3D CONCORD
FS
     C15 H16 N4 O2
MF
SR
     Chemical Library
       Supplier: MicroChemistry Ltd.
     STN Files:
                  CHEMCATS
LC
```

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L5 ANSWER 3 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 280768-70-9 REGISTRY

Entered STN: 27 Jul 2000

CN 4-Piperidinecarboxamide, N-[2-[[(5-chloro-2-pyrimidinyl)amino]carbonyl]phe

nyl]-1-(4-pyridinyl)- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C22 H21 Cl N6 O2

SR CA

ED

LC STN Files: CA, CAPLUS, USPATZ, USPATFULL

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 4 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 267891-53-2 REGISTRY

ED Entered STN: 02 Jun 2000

CN Benzamide, N-(5-chloro-2-quinazolinyl)-2-[(4-pyridinylmethyl)amino]- (9CI)

(CA INDEX NAME)

FS 3D CONCORD

MF C21 H16 C1 N5 O

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 267891-24-7 REGISTRY

ED Entered STN: 02 Jun 2000

CN Benzamide, N-(5-chloro-2-pyrimidinyl)-2-[(4-pyridinylmethyl)amino]- (9CI)

(CA INDEX NAME)

FS 3D CONCORD

MF C17 H14 Cl N5 O

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 6 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 180206-29-5 REGISTRY

ED Entered STN: 29 Aug 1996

CN Benzamide, 2,3,4-tris(phenylmethoxy)-N-2-pyrimidinyl- (9CI) (CA INDEX

NAME)

FS 3D CONCORD

MF C32 H27 N3 O4

SR CA

LC STN Files: CA, CAPLUS

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L5 ANSWER 7 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 69589-68-0 REGISTRY

ED Entered STN: 16 Nov 1984

CN Benzamide, 2-(benzoylamino)-N-2-pyrimidinyl- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C18 H14 N4 O2

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT

(*File contains numerically searchable property data)

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d 15 all 1-7

YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y) /N:y

L5 ANSWER 1 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 856975-07-0 REGISTRY

ED Entered STN: 26 Jul 2005

CN Pyrimidine, 2-[2-(benzyloxy)-4-nitrobenzamido]-4,6-dimethyl- (5CI) (CA

INDEX NAME)

FS 3D CONCORD

MF C20 H18 N4 O4

SR CAS EARLY REGISTRATIONS

LC STN Files: CA, CAPLUS

DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: NORL (No role in record)

Ring System Data

| | | Size of the Rings | Ring System
Formula
RF | Ring
Identifier
RID | RID
Occurrence
Count |
|----|----|-------------------|------------------------------|--------------------------------------|----------------------------|
| C6 | C6 | 6 | | +=======
 46.150.18
 46.195.39 | |

$$\begin{array}{c|c} \text{Me} & \text{O} & \text{NO2} \\ \hline & \text{N} & \text{NH-C} \\ \hline & \text{Ph-CH}_2-\text{O} \\ \\ \text{Me} & \end{array}$$

Predicted Properties (PPROP)

| PROPERTY (CODE) | | CONDITION | |
|---|--------------------------|--------------|--------------------------|
| Bioconc. Factor (BCF) 4.8 Bioconc. Factor (BCF) 238 Bioconc. Factor (BCF) 248 Bioconc. Factor (BCF) 230 | 39 p
3 p
3 p | OH 4
OH 7 | (1)
(1)
(1)
(1) |

| Bioconc. Factor (BCF) | 25.6 | рн 10 | (1) |
|------------------------------|-----------------|------------------|-----|
| Freely Rotatable Bonds (FRB) | 7 | | (1) |
| H acceptors (HAC) | 8 | | (1) |
| H donors (HD) | 1 | | (1) |
| Koc (KOC) | 35.4 | pH 1 | (1) |
| Koc (KOC) | 1726 | pH 4 | (1) |
| Koc (KOC) | 1797 | рн 7 | (1) |
| Koc (KOC) | 1666 | рн 8 | (1) |
| Koc (KOC) | 185 | pH 10 | (1) |
| logD (LOGD) | 1.75 | рн 1 | (1) |
| logD (LOGD) | 3.44 | pH 4 | (1) |
| logD (LOGD) | 3.45 | pH 7 | (1) |
| logD (LOGD) | 3.42 | pH 8 | (1) |
| logD (LOGD) | 2.47 | pH 10 | (1) |
| logP (LOGP) | 3.460+/-0.596 | • | (1) |
| Molar Solubility (SLB.MOL) | 0.00037 mol/L | pH 1 | (1) |
| Molar Solubility (SLB.MOL) | 0.0000076 mol/L | - | (1) |
| • | 0.0000073 mol/L | - | (1) |
| | 0.0000078 mol/L | | (1) |
| Molar Solubility (SLB.MOL) | 0.0000070 mol/L | pH 10 | (1) |
| = | 378.38 | pn 10 | (1) |
| Molecular Weight (MW) | ! . |
 Most Acidic | |
| pKa (PKA) | 9.05+/-0.70 | | |
| pKa (PKA) | 2.70+/-0.17 | Most Basic | (1) |

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V4.76 ((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

Tuberculostatic derivatives of p-aminobenzoic acid. III. Heterocyclic

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

AN

47:22216 CA

derivatives of 4-aminosalicylic acid

```
Jensen, Kai Arne; Ingvorsen, Helmuth
AU
CS
     Univ. Copenhagen
     Acta Chemica Scandinavica (1952), 6, 161-5
SO
     CODEN: ACHSE7; ISSN: 0904-213X
DT
     Journal
     English
LΑ
CC
     10 (Organic Chemistry)
     cf. C.A. 43, 7454i. A number of heterocyclic derivs. of 4-nitro- (I) and
AΒ
     4-aminosalicylic acid (II) were prepared, including 4-nitro-
     salicylomorpholide (III), m. 247-8°, and -piperidide (IV), m.
     230-2°; 4-aminosalicylomorpholide (V), m. 161-2°, and
     -piperidide (VI), m. 134-5°; 2-benzyloxy-4-nitro-(VII), m.
     170° and 4-aminobenzoic acid (VIII), m. 160°;
     2-benzyloxy-4-nitrobenzoyl chloride (IX), m. 122°, -benzamide (X),
     m. 178°, and -benzanilide (XI), m. 201°;
     4-amino-salicylanilide (XII), m. 143°; 2-(2-benzyloxy-4'-
     nitrobenzamido)pyridine (XIII), m. 144°, -thiazole (XIV), m.
     201° -5-methyl-1,3,4-thiadiazole (XV), m. 196°, and
     -4,6-dimethylpyrimidine (XVI), m. 206°; and 2-(2-benzyloxy-4-
     aminobenzamido)pyridine (XVII), m. 183°, -thiazole (XVIII), m.
     214-15°, and -5-methyl-1,3,4-thiazole (XIX), m. 110-11°. Et
     4-nitrosalicylate (3 g.) and 3 g. morpholine (XX) were heated 5 h. at
     120°, the excess XX removed at 100° in vacuo, the residue
     dissolved in hot H2O, acidified with HOAc, and the solution cooled, giving
     50% III. IV was similarly prepared III (0.5 g.) hydrogenated with 0.01 g.
     PtO2 in 25 cc. EtOH, all of the EtOH removed in vacuo, and fractional
     crystallization of the residue from petr. ether gave 0.2 g.V. VI was similarly
     prepared I (50 g.), 35 g. PhCH2Cl, and 50 cc. 20% NaOH in 100 cc. EtOH were
     refluxed until colorless, 0.2 N NaOH added until the color reappeared, the
     EtOH distilled, H2O added, and dilute HCl added to complete the precipitation of VII
     (40 g.). VII hydrogenated over PtO2 with the amount of H calculated for reduction
     of the NO2 gave VIII. VII (10 g.) and 10 cc. SOCl2 were refluxed 1-1.5
     h., the excess SOCl2 was removed in vacuo, and the IX (9.2 g.) treated
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with C and recrystd. from C6H6; 2 g. IX and 10 cc. cold, concentrated aqueous NH3 in
30 cc. H2O neutralized with HOAc gave 1.3 g. X (from 90% EtOH). IX (2.9
g.), 1 g. PhNH2, and 5 cc. pyridine were cooled and the mixture poured into
300 cc. H2O, giving 2.2 g. XI (from HOAc). XI hydrogenated in EtOH, the
solution filtered, part of the EtOH removed in vacuo, H2O added, the solution
heated, charcoal added, and the hot solution filtered gave XII. XIII to XVI
were prepared like VII, in 2.2, 2.7, 1.7, and 1.7 g. yields, resp., from 2.9
q. acid chloride. XVII to XIX were obtained by hydrogenation of the
corresponding nitro compds. over PtO2 in EtOH. Hydrogenation of the nitro
compds. at 100° and 150 atmospheric gave the corresponding azoxy compds.
Heterocyclic compounds
Heterocyclic compounds
Heterocyclic compounds
Heterocyclic compounds
Salicylamide, 4-nitro-N-2-pyridyl-
Salicylamide, N-(5-methyl-1,3,4-thiadiazol-2-yl)-4-nitro-
Salicylanilide, 4-nitro-4'-sulfamoyl-
                                   150-13-0, Benzoic acid, p-amino-
65-49-6, Salicylic acid, 4-amino-
   (derivs.)
5340-21-6, Benzoic acid, 2-(benzyloxy)-4-nitro- 6935-15-5, Salicylic
acid, 4-carboxyamino-, 4-benzyl ester 39614-82-9, Salicyloyl chloride,
           78154-65-1, Salicylanilide, 4-amino-
                                                 78154-68-4, Morpholine,
                        78154-68-4, Phenol, 2-morpholinocarbonyl-5-nitro-
4-(4-nitrosalicyloyl)-
   78154-69-5, Piperidine, 1-(4-nitrosalicyloyl)-
                                                    78154-69-5, Phenol,
5-nitro-2-piperidinocarbonyl- 78154-70-8, Morpholine,
                         78154-71-9, Phenol, 5-amino-2-piperidinocarbonyl-
4-(4-aminosalicyloyl)-
   78154-71-9, Piperidine, 1-(4-aminosalicyloyl)- 99072-94-3,
                                                            99185-78-1,
Salicylamide, 4-amino-N-(5-methyl-1,3,4-thiadiazol-2-yl)-
Salicylamide, 4-amino-N-2-thiazolyl- 99989-22-7, Salicylamide,
                      100872-84-2, Benzamide, 2-(benzyloxy)-4-nitro-
4-amino-N-2-pyridyl-
106952-12-9, Salicylanilide, 4',4'''-sulfonylbis[4-amino- 109016-83-3,
                                        193803-83-7, Benzoic acid,
Salicylanilide, 4-amino-4'-sulfamoyl-
4-amino-2-(benzyloxy)-
                        607713-82-6, Benzoyl chloride,
                        721920-30-5, 5-Thiazolecarboxylic acid,
2-(benzyloxy)-4-nitro-
4-methyl-2-(4-nitrosalicylamido)-, ethyl ester 850852-03-8, Thiazole,
2-[2-(benzyloxy)-4-nitrobenzamido]- 856848-98-1, Pyridine, 2-[2-(benzyloxy)-4-nitrobenzamido]- 856861-93-3, Salicylamide,
                            856975-07-0, Pyrimidine, 2-[2-(benzyloxy)-4-
4-nitro-N-s-triazol-3-yl-
                                857533-50-7, Benzanilide,
nitrobenzamido] -4,6-dimethyl-
                       857534-05-5, Benzanilide, 2-(benzyloxy)-4-nitro-
4-amino-2-(benzyloxy)-
857748-51-7, 1,3,4-Thiadiazole, 2-[4-amino-2-(benzyloxy)benzamido]-5-
          857748-52-8, 1,3,4-Thiadiazole, 2-[2-(benzyloxy)-4-
                           857749-06-5, 1,3,4-Thiadiazole,
nitrobenzamido]-5-methyl-
                                                    857749-06-5,
2-methyl-5-[N4-(4-nitrosalicyloyl)sulfanilamido]-
Salicylanilide, 4'-[(5-methyl-1,3,4-thiadiazol-2-yl)sulfamoyl]-4-nitro-
857756-40-2, Salicylamide, N-(4,5-dimethyl-2-thiazolyl)-4-nitro-
                                                                    857756-
48-0, Salicylamide, 4-nitro-N-p-sulfamoylbenzyl- 857756-83-3,
Salicylanilide, 4-amino-4'-(2-thiazolylsulfamoyl)-
                                                     857757-02-9,
Salicylanilide, 4'-[(4-methyl-2-pyrimidinyl)sulfamoyl]-4-nitro-
                                                                   857757-0
2-9, Pyrimidine, 4-methyl-2-[N4-(4-nitrosalicyloyl)sulfanilamido]-
857757-06-3, Salicylanilide, 4-nitro-4'-(2-thiazolylsulfamoyl)-
                                                                   857757-0
6-3, Thiazole, 2-[N4-(4-nitrosalicyloyl)sulfanilamido]-
                                                           858479-10-4,
Salicylamide, 4-nitro-N-2-thiazolyl- 858479-45-5, Salicylamide,
                              858479-46-6, Salicylanilide,
4-amino-N-p-sulfamoylbenzyl-
4-nitro-4'-(2-pyrimidinylsulfamoyl)-
                                      858479-47-7, Salicylanilide,
4-nitro-4'-(2-pyridylsulfamoyl)-
                                   858479-65-9, Salicylanilide,
4-amino-4'-[(5-methyl-1,3,4-thiadiazol-2-yl)sulfamoyl]-
                                                           858479-65-9,
1,3,4-Thiadiazole, 2-[N4-(4-aminosalicyloyl)sulfanilamido]-5-methyl-
                                                              860507-31-9,
859466-83-4, Thiazole, 2-[4-amino-2-(benzyloxy)benzamido]-
Salicylamide, 4-amino-N-(4,5-dimethyl-2-thiazolyl)-
                                                      860507-36-4,
                                              867131-41-7, Pyridine,
Salicylanilide, 4',4'''-sulfonylbis[4-nitro-
2-[4-amino-2-(benzyloxy)benzamido] - 873401-46-8, 1,3,4-Thiadiazole,
2-methyl-5-(4-nitrosalicylamido)-
   (preparation of)
ANSWER 2 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
349622-99-7 REGISTRY
```

Benzamide, 2-(acetylamino)-N-(4,6-dimethyl-2-pyrimidinyl)- (9CI) (CA

IT

IT

IT

IT

L5

RN

ED

CN

Entered STN: 01 Aug 2001

INDEX NAME)

FS 3D CONCORD MFC15 H16 N4 O2 Chemical Library SR

Supplier: MicroChemistry Ltd. STN Files: CHEMCATS

LC

Ring System Data

| Elemental | Elemental | Size of | Ring System | Ring | RID |
|-----------|-----------|-----------|-------------|----------------|------------|
| Analysis | Sequence | the Rings | Formula | Identifier | Occurrence |
| EA | ES | SZ | RF | RID | Count |
| ======== | +======= | +=======+ | -========== | -
-======== | +======= |
| C6 | C6 | 6 | C6 | 46.150.18 | 1 |
| C4N2 | NCNC3 | 6 | C4N2 | 46.195.39 | 1 |

Predicted Properties (PPROP)

| PROPERTY (CODE) | VALUE | CONDITION NOTE |
|---|--|---------------------------------------|
| | +===================================== | +========+====
 рн 1 25 deg C (1) |
| Bioconc. Factor (BCF) Bioconc. Factor (BCF) | 6.15 | pH 2 25 deg C (1) |
| Bioconc. Factor (BCF) | 12.10 | pH 3 25 deg C (1) |
| Bioconc. Factor (BCF) | 13.40 | pH 4 25 deg C (1) |
| Bioconc. Factor (BCF) | 13.55 | pH 5 25 deg C (1) |
| Bioconc. Factor (BCF) | 13.56 | pH 6 25 deg C (1) |
| Bioconc. Factor (BCF) | 13.56 | pH 7 25 deg C (1) |
| Bioconc. Factor (BCF) | 13.52 | pH 8 25 deg C (1) |
| Bioconc. Factor (BCF) | 13.11 | pH 9 25 deg C (1) |
| Bioconc. Factor (BCF) | 10.08 | pH 10 25 deg C (1) |
| Density (DEN) | 1.290+/-0.06 g/cm**3 | 760 Torr (1) |
| Freely Rotatable Bonds (FRB) | 2 | (1) |
| H acceptors (HAC) | 6 | (1) |
| H donors (HD) | 2 | (1) |
| Hydrogen Donors/Acceptors Sum | İ8 | (1) |
| (HDAS) | İ | |
| Koc (KOC) | 17.75 | рн 1 25 deg C (1) |
| Koc (KOC) | 101.91 | pH 2 25 deg C (1) |
| Koc (KOC) | 200.58 | pH 3 25 deg C (1) |
| Koc (KOC) | 222.17 | pH 4 25 deg C (1) |
| Koc (KOC) | 224.59 | pH 5 25 deg C (1) |
| Koc (KOC) | 224.82 | pH 6 25 deg C (1) |
| Koc (KOC) | 224.78 | pH 7 25 deg C (1) |
| Koc (KOC) | 224.08 | pH 8 25 deg C (1) |
| Koc (KOC) | 217.33 | pH 9 25 deg C (1) |
| Koc (KOC) | 167.13 | pH 10 25 deg C (1) |
| logD (LOGD) | 0.69 | pH 1 25 deg C (1) |
| logD (LOGD) | 1.45 | pH 2 25 deg C (1) |
| logD (LOGD) | 1.74 | pH 3 25 deg C (1) |
| logD (LOGD) | 1.79 | pH 4 25 deg C (1) |
| logD (LOGD) | 1.79 | pH 5 25 deg C (1) |
| logD (LOGD) | 1.79 | pH 6 25 deg C (1) |
| logD (LOGD) | 1.79 | рн 7 25 deg C (1) |

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pH 8
                                                              25 deg C
logD (LOGD)
                                1.79
                                                                           (1)
logD (LOGD)
                                1.78
                                                        pH 9 25 deg C
                                                                           (1)
logD (LOGD)
                                1.66
                                                        pH 10 25 deg C
                                                                           (1)
                                                                           (1)
                                1.793+/-0.598
                                                        25 deg C
logP (LOGP)
                                                        25 deg C
                                                                           (1)
Mass Intrinsic Solubility
                                0.12 \, g/L
 (ISLB.MASS)
                                1.5 g/L
                                                       pH 1
                                                              25 deg C
                                                                           (1)
Mass Solubility (SLB.MASS)
                                0.27 g/L
Mass Solubility (SLB.MASS)
                                                       pH 2
                                                              25 deg C
                                                                           (1)
                                                       pH 3
Mass Solubility (SLB.MASS)
                                                              25 deg C
                                0.14 \, g/L
                                                                           (1)
                                                       pH 4
Mass Solubility (SLB.MASS)
                                0.12 \, \text{g/L}
                                                              25 deg C
                                                                           (1)
                                                       pH 5
Mass Solubility (SLB.MASS)
                                0.12 g/L
                                                              25 deg C
                                                                           (1)
                                                       pH 6
Mass Solubility (SLB.MASS)
                                0.12 g/L
                                                              25 deg C
                                                                           (1)
                                                       |pH 7
Mass Solubility (SLB.MASS)
                                0.12 g/L
                                                              25 deg C
                                                                           (1)
                                                       B Hq
Mass Solubility (SLB.MASS)
                                0.12 g/L
                                                              25 deg C
                                                                           (1)
                                                       |pH 9 25 deg C
Mass Solubility (SLB.MASS)
                                0.13 g/L
                                                                           (1)
                                                       |pH 10 25 deg C
Mass Solubility (SLB.MASS)
                                0.16 \, \text{g/L}
                                                                           (1)
Mass Solubility (SLB.MASS)
                                0.12 \, g/L
                                                       Unbuffered Water
                                                                          (1)
                                                       pH 6.81
                                                        25 deg C
                                                       25 deg C
Molar Intrinsic Solubility
                                0.00042 mol/L
                                                                           (1)
 (ISLB.MOL)
                                                       pH 1
Molar Solubility (SLB.MOL)
                                0.0054 mol/L
                                                              25 deg C
                                                                           (1)
                                                       pH 2
Molar Solubility (SLB.MOL)
                                0.00094 mol/L
                                                              25 deg C
                                                                           (1)
                                                       pH 3
Molar Solubility (SLB.MOL)
                                0.00048 mol/L
                                                              25 deg C
                                                                           (1)
                                                       pH 4
Molar Solubility (SLB.MOL)
                                0.00043 mol/L
                                                              25 deg C
                                                                           (1)
                                                       pH 5
Molar Solubility (SLB.MOL)
                                0.00042 \text{ mol/L}
                                                              25 deg C
                                                                           (1)
Molar Solubility (SLB.MOL)
                                0.00042 mol/L
                                                       pH 6
                                                              25 deg C
                                                                           (1)
                                                       pH 7
Molar Solubility (SLB.MOL)
                                0.00042 \text{ mol/L}
                                                              25 deg C
                                                                           (1)
Molar Solubility (SLB.MOL)
                                0.00043 \text{ mol/L}
                                                       8 Hq
                                                              25 deg C
                                                                           (1)
Molar Solubility (SLB.MOL)
                                0.00044 \text{ mol/L}
                                                       |pH 9 25 deg C
                                                                           (1)
                                                       pH 10 25 deg C
                                0.00057 mol/L
Molar Solubility (SLB.MOL)
                                                                           (1)
                                                        Unbuffered Water
Molar Solubility (SLB.MOL)
                                0.00042 mol/L
                                                                           (1)
                                                        pH 6.81
                                                        25 deg C
                                220.3+/-3.0 cm**3/mol 20 deg C
Molar Volume (MVOL)
                                                                           (1)
                                                        760 Torr
                                284.31
                                                                           (1)
Molecular Weight (MW)
                                10.46+/-0.70
                                                        Most Acidic
                                                                           (1)
pKa (PKA)
                                                        25 deg C
                                2.08+/-0.50
                                                        Most Basic
                                                                           (1)
pKa (PKA)
                                                        25 deg C
                                |83.98 A**2
Polar Surface Area (PSA)
                                                                           (1)
```

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.19 ((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

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L5 ANSWER 3 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
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RN 280768-70-9 REGISTRY

ED Entered STN: 27 Jul 2000

CN 4-Piperidinecarboxamide, N-[2-[[(5-chloro-2-pyrimidinyl)amino]carbonyl]phe nyl]-1-(4-pyridinyl)- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C22 H21 Cl N6 O2

SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Ring System Data

| | Elemental
Sequence
ES | the Rings
SZ | RF | Identifier
RID | Count |
|-----------|-----------------------------|-----------------|----|------------------------|-------|
| C6
C5N | C6
 NC5 | 6 | | 46.150.18
 46.156.1 | |

Predicted Properties (PPROP)

| PROPERTY (CODE) | VALUE | CONDITION | NOTE |
|---|--|------------------|------------|
| ====================================== | +===================================== | +======+
 | (1) |
| Bioconc. Factor (BCF) | 1.0
 1.0 | , - | (1) |
| Bioconc. Factor (BCF) Bioconc. Factor (BCF) | 1.0 | , - . | (1) |
| Bioconc. Factor (BCF) | 1.0 | | (1) |
| Bioconc. Factor (BCF) | 1.0 | , | (1) |
| Bioconc. Factor (BCF) | 1.0 | | (1) |
| Bioconc. Factor (BCF) | 1.0 | pH 7 25 deg C | (1) |
| Bioconc. Factor (BCF) | 1.0 | pH 8 25 deg C | (1) |
| Bioconc. Factor (BCF) | 1.0 | рн 9 25 deg C | (1) |
| Bioconc. Factor (BCF) | 1.70 | pH 10 25 deg C | (1) |
| Density (DEN) | 1.405+/-0.06 g/cm**3 | 760 Torr | (1) |
| Freely Rotatable Bonds (FRB) | 4 | į į | (1) |
| H acceptors (HAC) | 8 | 1 | (1) |
| H donors (HD) | 2 | 1 | (1) |
| Hydrogen Donors/Acceptors Sum | 10 | ! | (1) |
| (HDAS) | | ! | |
| Koc (KOC) | 1.73 | pH 1 25 deg C | (1) |
| Koc (KOC) | 1.75 | , - | (1) |
| Koc (KOC) | 1.76 | pH 3 25 deg C | (1) |
| Koc (KOC) | 1.76 | pH 4 25 deg C | (1) |
| Koc (KOC) | 1.76 | pH 5 25 deg C | (1) |
| Koc (KOC) | 1.76 | pH 6 25 deg C | (1) |
| Koc (KOC) | 1.83 | pH 7 25 deg C | (1) |
| Koc (KOC) | 2.47 | pH 8 25 deg C | (1) |
| Koc (KOC) | 7.46 | pH 9 25 deg C | (1)
(1) |
| Koc (KOC) | 19.72
 0.01 | pH 10 25 deg C | (1) |
| logD (LOGD)
logD (LOGD) | 0.01 | pH 2 25 deg C | (1) |
| logD (LOGD) | 0.01 | pH 3 25 deg C | (1) |
| logD (LOGD) | 0.01 | pH 4 25 deg C | (1) |
| logD (LOGD) | 0.01 | pH 5 25 deg C | (1) |
| logD (LOGD) | 0.02 | pH 6 25 deg C | (1) |
| logD (LOGD) | 0.03 | | (1) |
| logD (LOGD) | 0.16 | | (1) |
| logD (LOGD) | 0.64 | pH 9 25 deg C | (1) |
| logD (LOGD) | 1.06 | рн 10 25 deg C | (1) |
| logP (LOGP) | 2.514+/-0.646 | 25 deg C | (1) |
| Mass Intrinsic Solubility | 0.011 g/L | 25 deg C | (1) |
| (ISLB.MASS) | | ' | |
| Mass Solubility (SLB.MASS) | 3.7 g/L | pH 1 25 deg C | (1) |
| Mass Solubility (SLB.MASS) | 3.6 g/L | pH 2 25 deg C | (1) |
| Mass Solubility (SLB.MASS) | 3.6 g/L | pH 3 25 deg C | (1) |

```
pH 4
                                                             25 deg C
Mass Solubility (SLB.MASS)
                               |3.6 g/L|
                                                                         (1)
                                                       pH 5
                               3.6 \text{ g/L}
                                                             25 deg C
                                                                          (1)
Mass Solubility (SLB.MASS)
                                                      рн 6
Mass Solubility (SLB.MASS)
                               3.4 g/L
                                                             25 deg C
                                                                          (1)
                                                      pH 7
Mass Solubility (SLB.MASS)
                               2.3 g/L
                                                             25 deg C
                                                                          (1)
                                                      pH 8
                                                             25 deg C
                                                                          (1)
Mass Solubility (SLB.MASS)
                               0.57 g/L
                                                      |pH 9 25 deg C
                                                                          (1)
Mass Solubility (SLB.MASS)
                               0.079 g/L
                               0.026 g/L
                                                      pH 10 25 deg C
                                                                          (1)
Mass Solubility (SLB.MASS)
                                                       |Unbuffered Water|(1)
Mass Solubility (SLB.MASS)
                               0.035 g/L
                                                      pH 9.57
                                                       |25 deg C
                                                      |25 deg C
Molar Intrinsic Solubility
                               0.000026 mol/L
                                                                          (1)
 (ISLB.MOL)
                                                      |pH 1 25 deg C
                                                                          (1)
Molar Solubility (SLB.MOL)
                               0.0084 mol/L
                               0.0083 \text{ mol/L}
                                                      |pH 2 25 deg C
                                                                          (1)
Molar Solubility (SLB.MOL)
Molar Solubility (SLB.MOL)
                               0.0083 mol/L
                                                      |pH 3
                                                             25 deg C
                                                                          (1)
Molar Solubility (SLB.MOL)
                               0.0083 mol/L
                                                      pH 4
                                                             25 deg C
                                                                          (1)
                               0.0082 \text{ mol/L}
                                                      pH 5
                                                             25 deg C
                                                                          (1)
Molar Solubility (SLB.MOL)
                                                      |pH 6 25 deg C
Molar Solubility (SLB.MOL)
                               0.0078 mol/L
                                                                          (1)
                                                      pH 7 25 deg C
                               0.0053 \text{ mol/L}
                                                                          (1)
Molar Solubility (SLB.MOL)
                                                      pH 8 25 deg C
                                                                          (1)
Molar Solubility (SLB.MOL)
                               0.0013 \text{ mol/L}
                                                      pH 9 25 deg C
                               0.00018 mol/L
                                                                          (1)
Molar Solubility (SLB.MOL)
                                                      |pH 10 25 deg C
                                                                          (1)
Molar Solubility (SLB.MOL)
                               0.000059 mol/L
                                                       |Unbuffered Water | (1)
                               0.000080 mol/L
Molar Solubility (SLB.MOL)
                                                       pH 9.57
                                                       25 deg C
                                                                          (1)
                               |310.7+/-3.0 cm**3/mol|20 deg C
Molar Volume (MVOL)
                                                       760 Torr
                                                                          (1)
Molecular Weight (MW)
                                436.89
                                                                          (1)
                                9.58+/-0.70
                                                       Most Acidic
pKa (PKA)
                                                       25 deg C
                                                                          (1)
                                10.88+/-0.10
                                                       Most Basic
pKa (PKA)
                                                       25 deg C
Polar Surface Area (PSA)
                               100.11 A**2
                                                                          (1)
```

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.14 ((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

133:89437 CA

```
Preparation of heteroaryl-substituted aromatic amides as factor Xa
    Beight, Douglas Wade; Craft, Trelia Joyce; Denny, Carl Penman;
    Franciskovich, Jeffry Bernard; Goodson, Theodore, Jr.; Hall, Steven
    Edward; Herron, David Kent; Joseph, Sajan Pariyadan; Klimkowski, Valentine
    Joseph; Masters, John Joseph; Mendel, David; Milot, Guy; Pineiro-Nunez,
    Marta Maria; Sawyer, Jason Scott; Shuman, Robert Theodore; Smith, Gerald
    Floyd; Tebbe, Anne Louise; Tinsley, Jennifer Marie; Weir, Leonard Crayton;
    Wikel, James Howard; Wiley, Michael Robert; Yee, Ying Kwong
    Eli Lilly and Co., USA; Kyle, Jeffrey, Alan; et al.
    PCT Int. Appl., 403 pp.
    CODEN: PIXXD2
DT
    Patent
LA
    English
IC
     ICM C07D401-14
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C07D401-12; C07D417-14; C07D409-14; C07D405-14; C07D213-74; A61K031-395; A61K031-435; A61K031-495; A61P007-02; C07D401-14;

CO7D213-00; CO7D213-00; CO7D211-00
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1, 28, 63

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2000039118 A1 20000706 WO 1999-US29946 19991215

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,

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GI

The title compds. [I; A3-A6, together with the two carbons to which they AB are attached, complete a substituted benzene in which A3 = CR3, A4 = CR4, A5 = CR5, and A6 = CR6 (wherein R3 = H, Me, MeO, etc.; one of R4 and R5 = H, alkyl, halo, etc.; the other of R4 and R5 = H; R6 = H, Me, F, etc.); L1 = CONH; Q1 = 2-pyridinyl (un)substituted at the 5-position, 3-pyridinyl (un) substituted at the 6-position, 2-pyrimidinyl (un) substituted at the 5-position, etc.; R2 = L2Q2 (L2 = NHCO, NHCH2, OCH2, etc.; <math>Q2 =(un) substituted piperidinyl, piperazinyl, Ph, etc.)] and their pharmaceutically acceptable salts, useful as inhibitors of factor Xa (no data), were prepared and formulated. E.g., a multi-step synthesis of II.HCl was given. In general, compds. I are effective at 0.01-1000 mg/kg/day. arom amide heteroaryl prepn formulation factor Xa inhibitor anticoagulant ST IT Anticoagulants (preparation of heteroaryl-substituted aromatic amides as factor Xa inhibitors) IT

280769-23-5P 280769-24-6P 280769-16-6P 280769-22-4P 280769-11-1P 280769-68-8P 280769-83-7P 280770-51-6P 280769-46-2P 280769-59-7P 280770-66-3P 280770-79-8P 280770-91-4P 280770-59-4P 280770-52-7P 280771-19-9P 280771-47-3P 280771-49-5P 280770-93-6P 280770-95-8P 280771-53-1P 280771-55-3P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

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89-98-5, 2-Chlorobenzaldehyde
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98-74-8, 4-Nitrobenzenesulfonyl chloride
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104-88-1, 4-Chlorobenzaldehyde, reactions
                              106-47-8, 4-Chloroaniline, reactions
105-58-8, Diethyl carbonate
107-13-1, 2-Propenenitrile, reactions
                                         108-94-1, Cyclohexanone, reactions
                              111-42-2, reactions
110-52-1, 1,4-Dibromobutane
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Cyclopentanone
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Propionaldehyde, reactions 123-75-1, Pyrrolidine, reactions
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2-Fluoro-5-nitrobenzoic acid
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chloride
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280774-13-2
RL: RCT (Reactant); RACT (Reactant or reagent)
   (preparation of heteroaryl-substituted aromatic amides as factor Xa inhibitors)
                                                  2976-30-9P
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385-02-4P
            394-01-4P
                        1709-59-7P
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5470-49-5P
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4-Aminoisophthalic acid
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4-Chloro-2-iodoaniline
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piperidine-4-carboxaldehyde
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                              280771-85-9P
                                             280771-87-1P
                                                            280771-88-2P
280771-90-6P
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               280772-18-1P
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IT

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                                                                 280772-49-8P
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                                   280772-53-4P
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                                                  280772-72-7P
                                                                 280772-74-9P
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                                                  280772-79-4P
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                                                  280772-85-2P
                                                                 280772-87-4P
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                                   280773-72-0P
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                    280773-78-6P
                                   280773-79-7P
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     280773-90-2P
                                   280773-99-1P
     280773-97-9P
                    280773-98-0P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of heteroaryl-substituted aromatic amides as factor Xa inhibitors)
                    280774-01-8P
                                   280774-02-9P
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                                                                 280774-04-1P
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                    280774-06-3P
                                   280774-07-4P
                                                  280774-08-5P
                                                                 280774-09-6P
     280774-05-2P
     280774-15-4P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of heteroaryl-substituted aromatic amides as factor Xa inhibitors)
              THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 6
(1) Beight Douglas Wade; WO 9900121 A 1999 CAPLUS
(2) Beight Douglas Wade; WO 9900128 A 1999 CAPLUS
(3) Berlex Lab; WO 9628427 A 1996 CAPLUS
(4) Katakura; EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY CHIMICA THERAPEUTICA
    1995, V30(5), P387 CAPLUS
(5) Kunitada, S; CURRENT PHARMACEUTICAL DESIGN 1996, V2(5), P6
(6) Schering Ag; WO 9932477 A 1999 CAPLUS
     ANSWER 4 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
     267891-53-2 REGISTRY
     Entered STN: 02 Jun 2000
     Benzamide, N-(5-chloro-2-quinazolinyl)-2-[(4-pyridinylmethyl)amino]- (9CI)
     (CA INDEX NAME)
     3D CONCORD
     C21 H16 Cl N5 O
     CA
     STN Files:
                  CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
       Roles from patents: BIOL (Biological study); PREP (Preparation); USES
RL.P
       (Uses)
               ---11 04-0
                           سنطا ع
```

Ring System Data

IT

L5 RN

ED

CN

FS

MF

SR

LC

| Elemental | Elemental | Size of | Ring System | Ring | RID |
|-----------|-----------|-----------|--|------------|------------|
| Analysis | Sequence | the Rings | Formula | Identifier | Occurrence |
| EA | ES | SZ | RF | RID | Count |
| =======+ | ======= | -======= | -===================================== | -======= | -====== |
| C6 | C6 | 6 | C6 | 46.150.18 | 1 |
| C5N | NC5 | 6 | C5N | 46.156.30 | 1 |
| C4N2-C6 | NCNC3-C6 | 6-6 | C8N2 | 591.100.47 | 1 |

Predicted Properties (PPROP)

| PROPERTY (CODE) | VALUE | CONDITION | NOTE |
|---|--|--|---|
| Bioconc. Factor (BCF) Bioconc. Factor (BCF) Bioconc. Factor (BCF) Bioconc. Factor (BCF) Bioconc. Factor (BCF) Bioconc. Factor (BCF) Bioconc. Factor (BCF) Bioconc. Factor (BCF) Bioconc. Factor (BCF) Bioconc. Factor (BCF) Bioconc. Factor (BCF) Bioconc. Factor (BCF) Density (DEN) | 1.0
 1.0
 1.12
 6.75
 45.32
 116.61
 136.68
 122.15
 55.70
 10.63
 1.421+/-0.06 g/cm**3 | pH 1 | (1)
 (1)
 (1)
 (1)
 (1)
 (1)
 (1)
 (1)
 (1)
 (1)
 (1)
 (1)
 (1) |
| Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) LogD (LOGD) LogP (LOGP) Mass Intrinsic Solubility | 3.48
 8.07
 48.75
 327.37
 842.43
 987.39
 882.47
 402.41
 76.78
 0.42
 0.74
 1.11
 1.89
 2.72
 3.13
 3.20
 3.15
 2.81
 2.09 | pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C | (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) |
| (ISLB.MASS) Mass Solubility (SLB.MASS) | 0.78 g/L
 0.12 g/L
 0.018 g/L | pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C | (1)
(1)
(1)
(1)
(1)
(1) |

```
pH 7
                              0.0062 g/L
                                                            25 deg C
Mass Solubility (SLB.MASS)
                                                                        (1)
                                                     рн 8 25 deg C
рн 9 25 deg C
Mass Solubility (SLB.MASS)
                               0.0070 g/L
                                                                        (1)
Mass Solubility (SLB.MASS)
                               0.015 g/L
                                                                        (1)
                               0.082 g/L
Mass Solubility (SLB.MASS)
                                                     |pH 10 25 deg C
                                                                        (1)
                               0.0062 g/L
                                                      |Unbuffered Water|(1)
Mass Solubility (SLB.MASS)
                                                      pH 7.05
                                                      25 deg C
                               0.0000093 mol/L
                                                      |25 deg C
                                                                        (1)
Molar Intrinsic Solubility
 (ISLB.MOL)
                                                           25 deg C
                               0.010 mol/L
Molar Solubility (SLB.MOL)
                                                     pH 1
                                                                        (1)
                                                     |pH 2
Molar Solubility (SLB.MOL)
                               0.0048 mol/L
                                                            25 deg C
                                                                        (1)
Molar Solubility (SLB.MOL)
                                                     pH 3
                               0.0020 mol/L
                                                            25 deg C
                                                                        (1)
                                                     pH 4
Molar Solubility (SLB.MOL)
                               0.00032 mol/L
                                                            25 deg C
                                                                        (1)
                                                     |pH 5 25 deg C
Molar Solubility (SLB.MOL)
                               0.000047 mol/L
                                                                        (1)
                                                     |pH 6 25 deg C
                               0.000018 mol/L
                                                                        (1)
Molar Solubility (SLB.MOL)
                                                      pH 7
                                                            25 deg C
Molar Solubility (SLB.MOL)
                               0.000016 mol/L
                                                                        (1)
Molar Solubility (SLB.MOL)
                               0.000018 mol/L
                                                     |pH 8 25 deg C
                                                                        (1)
                               0.000039 mol/L
                                                      |pH 9 25 deg C
                                                                        (1)
Molar Solubility (SLB.MOL)
                               0.00021 mol/L
                                                      pH 10 25 deg C
                                                                        (1)
Molar Solubility (SLB.MOL)
Molar Solubility (SLB.MOL)
                               0.000016 mol/L
                                                      |Unbuffered Water|(1)
                                                      pH 7.05
                                                      25 deg C
                               274.2+/-3.0 cm**3/mol|20 deg C
                                                                        (1)
Molar Volume (MVOL)
                                                      760 Torr
Molecular Weight (MW)
                               389.84
                                                                        (1)
                               8.54+/-0.43
                                                      Most Acidic
                                                                        (1)
                                                                            (2)
pKa (PKA)
                                                      25 deg C
                               5.34+/-0.10
                                                      Most Basic
                                                                        (1) (2)
pKa (PKA)
                                                      25 deg C
                               79.80 A**2
Polar Surface Area (PSA)
                                                                        (1)
```

This substance may exist in multiple tautomeric forms. The property values in this table are calculated based upon the displayed form and may therefore differ from experimental values based on the actual tautomeric ratio at equilibrium.

- (1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.14 ((C) 1994-2006 ACD/Labs)
- (2) A significant difference may occur between experimental and calculated values.

See HELP PROPERTIES for information about property data sources in REGISTRY.

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

AN

132:334364 CA

```
TI
     Preparation of anthranilic acid amides as vascular endothelial growth
     factor receptor inhibitors.
     Huth, Andreas; Seidelmann, Dieter; Thierauch, Karl-Heinz; Bold, Guido;
ΙÑ
     Manley, Paul William; Furet, Pascal; Wood, Jeanette Marjorie; Mestan,
    Jurgen; Bruggen, Jose; Ferrari, Stefano; Kruger, Martin; Ottow, Eckhard;
     Menrad, Andreas; Schirner, Michael
    Schering Aktiengesellschaft, Germany; Novartis Aktiengesellschaft
PA
SO
     PCT Int. Appl., 96 pp.
     CODEN: PIXXD2
DT
     Patent
LΑ
     German
IC
     ICM C07D213-38
         C07D409-12; C07D401-12; C07D213-40; C07D413-12; C07D401-12;
          C07D401-12; C07C237-30; C07D213-61; C07D417-12; C07D401-12;
          C07D401-12; C07D401-14; C07D401-12; C07D405-12; C07D417-12;
          C07D405-12; C07D265-26
     27-16 (Heterocyclic Compounds (One Hetero Atom))
```

Section cross-reference(s): 1 FAN.CNT 2

```
KIND
                                           APPLICATION NO.
    PATENT NO.
                            DATE
                                                            DATE
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                            _ _ _ _ _ _
     _____
    WO 2000027819
                      A2
                            20000518
                                           WO 1999-EP8478
                                                             19991109
    WO 2000027819
                            20000817
                      A3
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             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
             MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                            20000907
                                           DE 1999-19910396 19990303
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                       A1
    DE 19910396
                       C2
                            20011213
                       AA
                            20000518
                                           CA 1999-2350208 19991109
    CA 2350208
                            20010814
                                           BR 1999-15553
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                       Α
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                                                            19991109
    EP 1129074
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
                                           TR 2001-20010130719991109
                            20020521
    TR 200101307
                       T2
                                           JP 2000-580999
                                                             19991109
    JP 2002529452
                       T2
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    NZ 511413
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                                           AU 2000-10454
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                            20050318
    HK 1041882
                       A1
                      19981110
PRAI GB 1998-24579
    DE 1999-19910396 19990303
    WO 1999-EP8478
                      19991109
```

PΙ

GI

Title compds. [I; A = NR2; W = O, S, H2, NR8; Z = NR10, N, NR10(CH2)q, AΒ alkyl, etc.; q = 1-6; AZR1 = tetrahydroisoquinolinyl, indazolyl, 5-chloroindolyl, etc.; R1 = (substituted) aryl, heteroaryl; R2 = H, alkyl; R3 = (substituted) mono- or bicyclic aryl, heteroaryl; R4-R7 = H, halo, (substituted) alkoxy, alkyl, carboxyalkyl; R5R6 = dioxetanyl; R8, R10 = H, alkyl]. Thus, Me N-(4-pyridylmethyl)anthranilate (preparation given) was stirred with Ph(CH2)3NH2 and Me3Al were stirred in PhMe to give N-(3-phenylprop-1-yl)-N2-(4-pyridylmethyl) anthranilamide. The latter inhibited VEGFR I with IC50 = $0.05 \mu M$.

anthranilamide prepn VEGF receptor inhibitor; angiogenesis inhibitor ST anthranilamide; vascular endothelial growth factor receptor inhibitor prepn anthranilamide

Blood vessel, neoplasm IT

(angiofibroma, treatment; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Medical goods

(catheters, antithrombogenic; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Kidney, disease

(diabetic nephropathy, treatment; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Vascular endothelial growth factor receptors

RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)

(gene KDR, inhibitors; preparation of anthranilic acid amides as VEGF

```
receptor inhibitors)
     Vascular endothelial growth factor receptors
IT
    RL: BPR (Biological process); BSU (Biological study, unclassified); MSC
     (Miscellaneous); BIOL (Biological study); PROC (Process)
        (gene flt 1, inhibitors; preparation of anthranilic acid amides as VEGF
        receptor inhibitors)
IT
    Kidney, disease
        (glomerulonephritis, treatment; preparation of anthranilic acid amides as
        VEGF receptor inhibitors)
IT
     Blood vessel, neoplasm
        (hemangioma, treatment; preparation of anthranilic acid amides as VEGF
        receptor inhibitors)
    Nerve, disease
IT
        (injury, treatment; preparation of anthranilic acid amides as VEGF receptor
        inhibitors)
    Blood vessel, disease
IT
        (microangiopathy, treatment of thrombotic microangiopathy; preparation of
        anthranilic acid amides as VEGF receptor inhibitors)
     Kidney, disease
IT
        (nephrosclerosis, treatment of malignant nephrosclerosis; preparation of
        anthranilic acid amides as VEGF receptor inhibitors)
     Angiogenesis inhibitors
IT
     Antiarteriosclerotics
     Antiarthritics
     Antitumor agents
        (preparation of anthranilic acid amides as VEGF receptor inhibitors)
IT
    Medical goods
        (stents, opening maintenance; preparation of anthranilic acid amides as VEGF
        receptor inhibitors)
IT
     Cirrhosis
     Eye, disease
     Kidney, disease
     Psoriasis
     Transplant rejection
        (treatment; preparation of anthranilic acid amides as VEGF receptor
        inhibitors)
     267891-62-3P
IT
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT
     (Reactant or reagent); USES (Uses)
        (preparation of anthranilic acid amides as VEGF receptor inhibitors)
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     267891-44-1P
                                   267891-46-3P
                                                  267891-47-4P
                    267891-45-2P
                                                  267891-52-1P
                                                                 267891-53-2P
                                   267891-51-0P
     267891-49-6P
                    267891-50-9P
                                                                 267891-58-7P
     267891-54-3P
                                   267891-56-5P
                                                  267891-57-6P
                    267891-55-4P
                                                  267891-63-4P
                                                                 267891-64-5P
     267891-59-8P
                    267891-60-1P
                                   267891-61-2P
                                                  267891-68-9P
                                                                 267891-69-0P
                                   267891-67-8P
     267891-65-6P
                    267891-66-7P
                                                                 267891-75-8P
                                   267891-73-6P
                                                  267891-74-7P
     267891-70-3P
                    267891-72-5P
                                                                 267891-80-5P
                                                  267891-79-2P
     267891-76-9P
                    267891-77-0P
                                   267891-78-1P
                                   267891-83-8P
                                                  267891-84-9P
                                                                 267891-85-0P
                    267891-82-7P
     267891-81-6P
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
     BIOL (Biological study); PREP (Preparation); USES (Uses)
        (preparation of anthranilic acid amides as VEGF receptor inhibitors)
                                 267891-93-0
                                               267891-94-1
                                                             267891-95-2
                   267891-92-9
IT
     267891-91-8
                                               267891-99-6
                                                             267892-00-2
                   267891-97-4
                                 267891-98-5
     267891-96-3
                                               267892-04-6
                                                             267892-05-7
                                 267892-03-5
     267892-01-3
                   267892-02-4
                   267892-07-9
                                 267892-09-1
                                               267892-11-5
                                                             267892-12-6
     267892-06-8
                                 267892-15-9
                   267892-14-8
     267892-13-7
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
```

(Uses)

(preparation of anthranilic acid amides as VEGF receptor inhibitors) IT 104-86-9, 4-Chlorobenzylamine 118-48-9, Isatoic anhydride 123-11-5, 4-Methoxybenzaldehyde, reactions 134-20-3, Methyl anthranilate 9, 2-Phenylpropylamine 635-21-2, 5-Chloroanthranilic acid 872 872-85-5, 19335-11-6, 5-Aminoindazole 101066-61-9, Pyridine-4-carboxaldehyde 2-Chloro-4-pyridinecarboxaldehyde 267891-90-7 267891-89-4 RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of anthranilic acid amides as VEGF receptor inhibitors) 267891-88-3P IT 16512-74-6P 267891-86-1P 267891-87-2P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of anthranilic acid amides as VEGF receptor inhibitors) L5 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN 267891-24-7 REGISTRY RN ED

Entered STN: 02 Jun 2000

Benzamide, N-(5-chloro-2-pyrimidinyl)-2-[(4-pyridinylmethyl)amino]- (9CI) CN

(CA INDEX NAME)

FS 3D CONCORD

C17 H14 Cl N5 O

SR CA

MF

CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL LC STN Files:

DT.CA CAplus document type: Patent

Roles from patents: BIOL (Biological study); PREP (Preparation); USES RL.P (Uses)

Ring System Data

| | | | Ring System | | RID |
|----------|----------|------------------|-------------|-------------------|----------|
| Analysis | Sequence | the Rings | Formula | Identifier | |
| EA | ES | SZ | RF | RID | Count |
| ======== | ====== | +====== + | }======== | -===== = - | -======= |
| C6 | C6 | 6 | C6 | 46.150.18 | 1 |
| C5N | NC5 | 6 | C5N | 46.156.30 | 1 |
| C4N2 | NCNC3 | i | C4N2 | 46.195.39 | 1 1 |

Predicted Properties (PPROP)

| PROPERTY | (CODE) | VALUE | | COI | MI. | CION | | NOTE |
|-----------------|------------|--|-----|-----|-----|------|------|-------|
| ============== | -========= | +===================================== | -== | === | === | ==== | ==== | +==== |
| Bioconc. Factor | (BCF) | 1.0 | рH | 1 | 25 | deg | C | (1) |
| Bioconc. Factor | (BCF) | 1.0 | рН | 2 | 25 | deg | С | (1) |
| Bioconc. Factor | (BCF) | 1.0 | рH | 3 | 25 | deg | С | (1) |
| Bioconc. Factor | (BCF) | 1.0 | рH | 4 | 25 | deg | C | (1) |
| Bioconc. Factor | (BCF) | 6.52 | рН | 5 | 25 | deg | C | (1) |
| Bioconc. Factor | (BCF) | 16.71 | рH | 6 | 25 | deg | С | (1) |
| Bioconc. Factor | (BCF) | 19.82 | Нq | 7 | 25 | deg | С | (1) |
| Bioconc. Factor | (BCF) | 20.02 | рн | 8 | 25 | deg | C | (1) |

| Bioconc. Factor (BCF) Bioconc. Factor (BCF) Density (DEN) Freely Rotatable Bonds (FRB) H acceptors (HAC) H donors (HD) Hydrogen Donors/Acceptors Sum (HDAS) | 18.47
10.34
1.415+/-0.06 g/cm**3
4
6
2 | pH 9 25 deg C
pH 10 25 deg C
760 Torr | (1)
(1)
(1)
(1)
(1)
(1) |
|--|--|---|--|
| Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) Koc (KOC) LogD (LOGD) LogP (LOGP) Mass Intrinsic Solubility | 1.0
1.05
2.34
14.35
96.41
247.20
293.14
296.15
273.17
152.97
-0.60
-0.43
-0.09
0.70
1.53
1.94
2.01
2.02
1.98
1.73
2.022+/-0.612
0.054 g/L | pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C pH 10 25 deg C pH 10 25 deg C 25 deg C 25 deg C 25 deg C 25 deg C | (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) |
| (ISLB.MASS) Mass Solubility (SLB.MASS) | , | pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C Unbuffered Water pH 7.57 25 deg C | (1)
(1)
(1)
(1)
(1)
(1)
(1)
(1)
(1)
(1) |
| (ISLB.MOL) Molar Solubility (SLB.MOL) | 0.069 mol/L 0.046 mol/L 0.021 mol/L 0.0034 mol/L 0.00050 mol/L 0.00050 mol/L 0.00017 mol/L 0.00016 mol/L 0.00018 mol/L 0.00032 mol/L 0.00016 mol/L 0.0 | PH 1 25 deg C PH 2 25 deg C PH 3 25 deg C PH 4 25 deg C PH 5 25 deg C PH 6 25 deg C PH 7 25 deg C PH 8 25 deg C PH 9 25 deg C PH 10 25 deg C PH 7.57 25 deg C 20 deg C 20 deg C 20 deg C 20 deg C 260 Torr |

 (1) |
| Molecular Weight (MW) pKa (PKA) pKa (PKA) Polar Surface Area (PSA) | 339.78
 10.01+/-0.70

 5.33+/-0.10

 79.80 A**2 | Most Acidic
 25 deg C
 Most Basic
 25 deg C | (1)
 (1)

 (1)

 (1) |

This substance may exist in multiple tautomeric forms. The property values in

this table are calculated based upon the displayed form and may therefore differ from experimental values based on the actual tautomeric ratio at equilibrium.

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.14 ((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY. 1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

```
REFERENCE 1
AN
     132:334364 CA
     Preparation of anthranilic acid amides as vascular endothelial growth
ΤI
     factor receptor inhibitors.
     Huth, Andreas; Seidelmann, Dieter; Thierauch, Karl-Heinz; Bold, Guido;
IN
     Manley, Paul William; Furet, Pascal; Wood, Jeanette Marjorie; Mestan,
     Jurgen; Bruggen, Jose; Ferrari, Stefano; Kruger, Martin; Ottow, Eckhard;
     Menrad, Andreas; Schirner, Michael
     Schering Aktiengesellschaft, Germany; Novartis Aktiengesellschaft
PA
SO
     PCT Int. Appl., 96 pp.
     CODEN: PIXXD2
DT
     Patent
     German
LA
IC
     ICM C07D213-38
     ICS C07D409-12; C07D401-12; C07D213-40; C07D413-12; C07D401-12;
          C07D401-12; C07C237-30; C07D213-61; C07D417-12; C07D401-12;
          C07D401-12; C07D401-14; C07D401-12; C07D405-12; C07D417-12;
          C07D405-12; C07D265-26
     27-16 (Heterocyclic Compounds (One Hetero Atom))
CC
     Section cross-reference(s): 1
```

| FAN.CNT | | | | | | | | | | | | | | | | | |
|----------------------------------|--|---|---|---|---|---|--|---|--|---|--|--|--------------------------|--|--|--------------------------|--------------------------|
| | TENT 1 | | | | | DATE | | | | | | | | DATE | | | |
| PI WO | 20000 | 02783 | 19 | | 2 | 20000 | 0518 | | | | 99-E | | | 1999 | 1109 | | |
| ,,, | ₩: | AE,
CZ,
IN,
MD,
SK,
AZ,
GH, | AL,
DE,
IS,
MG,
SL,
BY,
GM, | AM,
DK,
JP,
MK,
TJ,
KG,
KE, | AT,
DM,
KE,
MN,
TM,
KZ,
LS, | AU,
EE,
KG,
MW,
TR,
MD,
MW,
GB, | AZ,
ES,
KP,
MX,
TT,
RU,
SD, | BA,
FI,
KR,
NO,
TZ,
TJ,
SL, | GB,
KZ,
NZ,
UA,
TM
SZ, | GD,
LC,
PL,
UG, | GE,
LK,
PT,
US, | GH,
LR,
RO,
UZ, | GM,
LS,
RU,
VN, | HR,
LT,
SD,
YU,
BE, | HU,
LU,
SE,
ZA, | ID,
LV,
SG,
ZW, | IL,
MA,
SI,
AM, |
| DΕ | 19910 | CG,
0396
0396 | CI, | CM,
A1 | GA,
L
2 | GN,
20000
2001 | GW,
0907
1213 | ML, | MR,
DE | NE,
E 19 | SN,
99-1 | TD,
9910: | TG
396 | 1999 | 0303 | · | · |
| BR | 23502
99159
11290 | 553 | | Α | | 2001 | 0814 | | BF | ₹ 19 | 99-1 | 5553 | | 1999: | 1109 | | |
| JP
EE
NZ
AU
NO
BG | 20010
20029
20010
51141
77118
20010
10558
10418 | IE,
01307
52945
00258
13
80
00224
88
88 | SI,
7
52
3 | LT,
T2
A
A
B2
A
A | LV,
2
2
2 | 20020
20020
20040
20040
20010
20020
20050 | RO
0521
0910
1216
0130
0318
0710 | | TF
JF
EF
NZ
AU
NO
BO | 20
20
20
20
219
20
20
20 | 01-2
00-5
01-2
99-5
00-1
01-2 | 0010:
8099:
58
1141:
0454
245 | 1307
9
3 | 1999:
1999:
1999:
1999:
1999:
2001: | 1109
1109
1109
1109
1109
0507 | MC, | PT, |

PRAI GB 1998-24579 19981110 DE 1999-19910396 19990303

WO 1999-EP8478 19991109

AB Title compds. [I; A = NR2; W = O, S, H2, NR8; Z = NR10, N, NR10(CH2)q, alkyl, etc.; q = 1-6; AZR1 = tetrahydroisoquinolinyl, indazolyl, 5-chloroindolyl, etc.; R1 = (substituted) aryl, heteroaryl; R2 = H, alkyl; R3 = (substituted) mono- or bicyclic aryl, heteroaryl; R4-R7 = H, halo, (substituted) alkoxy, alkyl, carboxyalkyl; R5R6 = dioxetanyl; R8, R10 = H, alkyl]. Thus, Me N-(4-pyridylmethyl)anthranilate (preparation given) was stirred with Ph(CH2)3NH2 and Me3Al were stirred in PhMe to give N-(3-phenylprop-1-yl)-N2-(4-pyridylmethyl)anthranilamide. The latter inhibited VEGFR I with IC50 = 0.05 μM.

ST anthranilamide prepn VEGF receptor inhibitor; angiogenesis inhibitor anthranilamide; vascular endothelial growth factor receptor inhibitor prepn anthranilamide

IT Blood vessel, neoplasm

(angiofibroma, treatment; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Medical goods

(catheters, antithrombogenic; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Kidney, disease

(diabetic nephropathy, treatment; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Vascular endothelial growth factor receptors

RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)

(gene KDR, inhibitors; preparation of anthranilic acid amides as VEGF receptor inhibitors)

Vascular endothelial growth factor receptors

RL: BPR (Biological process); BSU (Biological study, unclassified); MSC (Miscellaneous); BIOL (Biological study); PROC (Process)

(gene flt 1, inhibitors; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Kidney, disease

IT

(glomerulonephritis, treatment; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Blood vessel, neoplasm

(hemangioma, treatment; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Nerve, disease

(injury, treatment; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Blood vessel, disease

(microangiopathy, treatment of thrombotic microangiopathy; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Kidney, disease

(nephrosclerosis, treatment of malignant nephrosclerosis; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Angiogenesis inhibitors

Antiarteriosclerotics

Antiarthritics

Antitumor agents

(preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Medical goods

(stents, opening maintenance; preparation of anthranilic acid amides as VEGF receptor inhibitors)

IT Cirrhosis

Eye, disease

Kidney, disease

Psoriasis

```
(treatment; preparation of anthranilic acid amides as VEGF receptor
       inhibitors)
ΙT
    267891-62-3P
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT
     (Reactant or reagent); USES (Uses)
        (preparation of anthranilic acid amides as VEGF receptor inhibitors)
                                  267891-06-5P
                                                 267891-07-6P
IT
    267891-04-3P
                   267891-05-4P
                                                               267891-08-7P
                                                               267891-13-4P
                                  267891-11-2P
                                                 267891-12-3P
    267891-09-8P
                   267891-10-1P
                                                               267891-18-9P
                                  267891-16-7P
                                                 267891-17-8P
                   267891-15-6P
    267891-14-5P
                                  267891-21-4P
                                                 267891-22-5P
                                                               267891-23-6P
                   267891-20-3P
    267891-19-0P
                   267891-25-8P
                                  267891-26-9P
                                                 267891-27-0P
                                                               267891-28-1P
    267891-24-7P
                   267891-30-5P
                                  267891-31-6P
                                                 267891-32-7P
                                                               267891-33-8P
    267891-29-2P
                                                 267891-37-2P
                                                               267891-38-3P
    267891-34-9P
                   267891-35-0P
                                  267891-36-1P
                                                 267891-42-9P
                                                               267891-43-0P
                   267891-40-7P
                                  267891-41-8P
    267891-39-4P
                                                               267891-48-5P
                                                 267891-47-4P
                   267891-45-2P
                                  267891-46-3P
    267891-44-1P
                                  267891-51-0P
                                                               267891-53-2P
                                                 267891-52-1P
    267891-49-6P
                   267891-50-9P
                                                267891-57-6P
                                                               267891-58-7P
    267891-54-3P
                   267891-55-4P
                                  267891-56-5P
                                                               267891-64-5P
                   267891-60-1P
                                  267891-61-2P
                                                267891-63-4P
    267891-59-8P
                                                267891-68-9P
                                                               267891-69-0P
                                  267891-67-8P
    267891-65-6P
                   267891-66-7P
                                                               267891-75-8P
                   267891-72-5P
                                  267891-73-6P
                                                 267891-74-7P
    267891-70-3P
                                                 267891-79-2P
                                                               267891-80-5P
                   267891-77-0P
                                  267891-78-1P
    267891-76-9P
                                  267891-83-8P
                                                 267891-84-9P
                                                               267891-85-0P
    267891-81-6P
                   267891-82-7P
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
    study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);
    BIOL (Biological study); PREP (Preparation); USES (Uses)
        (preparation of anthranilic acid amides as VEGF receptor inhibitors)
                                                            267891-95-2
                  267891-92-9
                                267891-93-0
                                             267891-94-1
IT
    267891-91-8
                                267891-98-5
                                              267891-99-6
                                                            267892-00-2
     267891-96-3
                  267891-97-4
                                267892-03-5
                                                            267892-05-7
     267892-01-3
                  267892-02-4
                                              267892-04-6
                                              267892-11-5
                                                            267892-12-6
     267892-06-8
                  267892-07-9
                                267892-09-1
                              267892-15-9
     267892-13-7
                  267892-14-8
    RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (preparation of anthranilic acid amides as VEGF receptor inhibitors)
     104-86-9, 4-Chlorobenzylamine 118-48-9, Isatoic anhydride
                                                                 123-11-5,
IT
     4-Methoxybenzaldehyde, reactions 134-20-3, Methyl anthranilate
                                                                      582-22-
     9, 2-Phenylpropylamine 635-21-2, 5-Chloroanthranilic acid
                                                                 872-85-5,
                               19335-11-6, 5-Aminoindazole
     Pyridine-4-carboxaldehyde
                                                            101066-61-9,
     2-Chloro-4-pyridinecarboxaldehyde 267891-89-4
                                                     267891-90-7
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (preparation of anthranilic acid amides as VEGF receptor inhibitors)
                                                267891-88-3P
                                 267891-87-2P
                  267891-86-1P
IT
     16512-74-6P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation of anthranilic acid amides as VEGF receptor inhibitors)
    ANSWER 6 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
L5
     180206-29-5 REGISTRY
RN
     Entered STN: 29 Aug 1996
ED
     Benzamide, 2,3,4-tris(phenylmethoxy)-N-2-pyrimidinyl- (9CI)
CN
    NAME)
FS
     3D CONCORD
     C32 H27 N3 O4
MF
SR
     CA
LC
     STN Files:
                 CA, CAPLUS
DT.CA CAplus document type: Patent
       Roles from patents: BIOL (Biological study); PREP (Preparation); RACT
RL.P
       (Reactant or reagent)
Ring System Data
Elemental | Elemental | Size of | Ring System |
                                            Ring
                                         Identifier Occurrence
Analysis | Sequence | the Rings |
                               Formula
                                                  Count
        | ES
                      SZ |
                                RF
                                            RID
______+
                       |C6
                                 46.150.18 4
```

Transplant rejection

Predicted Properties (PPROP)

| PROPERTY (CODE) | VALUE | CONDITION | NOTE |
|--|-----------------------------|---------------------------------------|---------------|
| Bioconc. Factor (BCF) | | +==================================== | +====
 (1) |
| Bioconc. Factor (BCF) | ! | pH 2 25 deg C | (1) |
| Bioconc. Factor (BCF) | | pH 3 25 deg C | (1) |
| Bioconc. Factor (BCF) | 10778.27 | pH 4 25 deg C | (1) |
| Bioconc. Factor (BCF) | | pH 5 25 deg C | (1) |
| Bioconc. Factor (BCF) | 10780.01 | pH 6 25 deg C | (1) |
| Bioconc. Factor (BCF) | | pH 7 25 deg C | (1) |
| Bioconc. Factor (BCF) | 10685.44 | pH 8 25 deg C | (1) |
| Bioconc. Factor (BCF) | 9896.65 | pH 9 25 deg C | (1) |
| Bioconc. Factor (BCF) | 5715.35 | рн 10 25 deg C | (1) |
| Density (DEN) | 1.265+/-0.06 g/cm**3 | 760 Torr | (1) |
| Freely Rotatable Bonds (FRB) | 10 | | (1) |
| H acceptors (HAC) | 7 | | (1) |
| H donors (HD) | li | | (1) |
| Hydrogen Donors/Acceptors Sum | I — | j | (1) |
| (HDAS) | i o | i | \ |
| Koc (KOC) | 21384.27 | pH 1 25 deg C | (1) |
| Koc (KOC) | ! | pH 2 25 deg C | (1) |
| Koc (KOC) | ! | pH 3 25 deg C | (1) |
| Koc (KOC) | | pH 4 25 deg C | (1) |
| | 26777.36 | pH 5 25 deg C | (1) |
| Koc (KOC) | ! | - | (1) |
| Koc (KOC) | ! | 1- | (1) |
| Koc (KOC) | 26760.84 | , - | : |
| Koc (KOC) | ! | pH 8 25 deg C | (1) |
| Koc (KOC) | 24587.68 | pH 9 25 deg C | (1) |
| Koc (KOC) | 14199.46 | pH 10 25 deg C | (1) |
| logD (LOGD) | 5.51 | pH 1 25 deg C | (1) |
| logD (LOGD) | 5.60 | pH 2 25 deg C | (1) |
| logD (LOGD) | 5.61 | pH 3 25 deg C | (1) |
| logD (LOGD) | 5.61 | pH 4 25 deg C | (1) |
| logD (LOGD) | 5.61 | pH 5 25 deg C | (1) |
| logD (LOGD) | 5.61 | pH 6 25 deg C | (1) |
| logD (LOGD) | 5.61 | pH 7 25 deg C | (1) |
| logD (LOGD) | 5.60 | pH 8 25 deg C | (1) |
| logD (LOGD) | 5.57 | pH 9 25 deg C | (1) |
| logD (LOGD) | 5.33 | pH 10 25 deg C | (1) |
| logP (LOGP) | 5.610+/-0.611 | 25 deg C | (1) |
| Mass Intrinsic Solubility
(ISLB.MASS) | 0.00016 g/L
 | 25 deg C | (1) |
| Mass Solubility (SLB.MASS) | 0.00020 g/L | pH 1 25 deg C | (1) |
| Mass Solubility (SLB.MASS) | | | (1) |
| Mass Solubility (SLB.MASS) | 0.00016 g/L | pH 3 25 deg C | (1) |
| Mass Solubility (SLB.MASS) | 0.00016 g/L | pH 4 25 deg C | (1) |
| Mass Solubility (SLB.MASS) | 0.00016 g/L | pH 5 25 deg C | (1) |
| Mass Solubility (SLB.MASS) | 0.00016 g/L | pH 6 25 deg C | (1) |
| Mass Solubility (SLB.MASS) | 0.00018 g/L
 0.00016 g/L | pH 7 25 deg C | (1) |
| Mass Solubility (SLB.MASS) | 0.00016 g/L | рн 7 25 deg C | (1) |
| Mass Solubility (SLB.MASS) | | ph 9 25 deg C | (1) |
| riass Solubility (Sub.PASS) | [0.000I/ g/L | ipii y 23 deg e | \ - / |

| Mass Solubility (SLB.MASS) | 0.00030 g/L | | (1) |
|----------------------------|-----------------------|------------------|------|
| Mass Solubility (SLB.MASS) | 0.00016 g/L | Unbuffered Water | (1) |
| | | pH 7.00 | ! |
| | | 25 deg C | ļ |
| Molar Intrinsic Solubility | 0.00000031 mol/L | 25 deg C | (1) |
| (ISLB.MOL) | | | |
| Molar Solubility (SLB.MOL) | 0.00000038 mol/L | | (1) |
| Molar Solubility (SLB.MOL) | 0.00000031 mol/L | | (1) |
| Molar Solubility (SLB.MOL) | 0.00000031 mol/L | | (1) |
| Molar Solubility (SLB.MOL) | 0.00000031 mol/L | | (1) |
| Molar Solubility (SLB.MOL) | 0.00000031 mol/L | | (1) |
| Molar Solubility (SLB.MOL) | 0.00000031 mol/L | | (1) |
| Molar Solubility (SLB.MOL) | 0.00000031 mol/L | | (1) |
| Molar Solubility (SLB.MOL) | 0.00000031 mol/L | | (1) |
| Molar Solubility (SLB.MOL) | 0.00000033 mol/L | , _ | (1) |
| Molar Solubility (SLB.MOL) | 0.00000058 mol/L | <u> </u> | (1) |
| Molar Solubility (SLB.MOL) | 0.00000031 mol/L | Unbuffered Water | [(1) |
| | | pH 7.00 | ļ |
| | | 25 deg C | ļ |
| Molar Volume (MVOL) | 408.8+/-3.0 cm**3/mol | | (1) |
| | | 760 Torr | |
| Molecular Weight (MW) | 517.57 | | (1) |
| pKa (PKA) | 10.04+/-0.70 | Most Acidic | (1) |
| | [| 25 deg C | |
| pKa (PKA) | 0.40+/-0.33 | Most Basic | (1) |
| | | 25 deg C | |
| Polar Surface Area (PSA) | 82.57 A**2 | I | (1) |

This substance may exist in multiple tautomeric forms. The property values in this table are calculated based upon the displayed form and may therefore differ from experimental values based on the actual tautomeric ratio at equilibrium.

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.14 ((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

GΙ

```
AN
    125:167581 CA
    Preparation of hydroxybenzamide derivatives as prevention and treatment
TI
    agents for bone diseases
    Nomoto, Takashi; Kawakami, Kumiko; Akagawa, Akiko; Matsuyama, Kenji;
IN
    Torigoe, Koichiro
    Banyu Pharma Co Ltd, Japan
PA
    Jpn. Kokai Tokkyo Koho, 15 pp.
SO
    CODEN: JKXXAF
DT
    Patent
LA
    Japanese
     ICM C07C235-64
IC
         A61K031-165; A61K031-415; A61K031-44; A61K031-445; A61K031-47;
     ICS
         A61K031-505; C07C235-56; C07C237-42; C07C255-24; C07D211-06;
         C07D211-22; C07D211-58; C07D213-75; C07D217-06; C07D231-56;
         C07D233-88; C07D239-26; C07D295-18
     25-19 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
CC
     Section cross-reference(s): 1
FAN.CNT 1
                                          APPLICATION NO.
     PATENT NO.
                     KIND DATE
                                                           DATE
                           -----
     ______
                     _ _ _ -
    JP 08143525
                     A2
                           19960604
                                         JP 1994-311235
                                                           19941121
PT
PRAI JP 1994-311235 19941121
```

```
HO CONR<sup>2</sup> (CH<sub>2</sub>) nA
```

The title bone disease inhibitors contain a compound (I) [R1 = H, halo, OH, AB NO2, lower alkyl, lower alkoxy; R2 = H, lower alkyl; n = 0-3; A = aryl, heteroaryl; A and R2 may combine to complete piperidine or tetrahydroisoquinoline ring]. I is an efficient component for prevention and treatment of bone diseases caused by Vacuolar ATPase. Thus, 2,3,4-tribenzyloxybenzoic acid was reacted with aniline in the presence of 4-dimethylaminopyridine and 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide, followed by hydrogenation to give I [R1 = OH; R2 = H; n = 0; A = Ph], 4μM of which showed Vacuolar ATPase inhibiting activity of 97%. hydroxybenzamide prepn prevention treatment bone disease; Vacuolar ATPase ST inhibitor hydroxybenzamide Bone, disease IT (synthesis of hydroxybenzamide derivs. as Vacuolar ATPase inhibitors) 9000-83-3 IT RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (proton-translocating; synthesis of hydroxybenzamide derivs. as Vacuolar ATPase inhibitors) 180206-07-9P 180206-26-2P 180206-27-3P 180206-28-4P 180206-29-5P IT 180206-30-8P 180206-33-1P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent) (synthesis of hydroxybenzamide derivs. as Vacuolar ATPase inhibitors) 180205-91-8P 180205-92-9P 180205-93-0P IT 180205-89-4P 180205-90-7P 180205-97-4P 180205-98-5P 180205-94-1P 180205-95-2P 180205-96-3P 180205-99-6P 180206-02-4P 180206-03-5P 180206-00-2P 180206-01-3P 180206-08-0P 180206-09-1P 180206-05-7P 180206-06-8P 180206-04-6P 180206-11-5P 180206-12-6P 180206-13-7P 180206-14-8P 180206-10-4P 180206-15-9P 180206-16-0P 180206-17-1P 180206-18-2P 180206-19-3P 180206-22-8P 180206-23-9P 180206-24-0P 180206-20-6P 180206-21-7P 180206-25-1P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (synthesis of hydroxybenzamide derivs. as Vacuolar ATPase inhibitors) 88-74-4, o-Nitroaniline 100-44-7, Benzyl IT 62-53-3, Aniline, reactions 106-50-3, 1,4-Phenylenediamine, reactions 543-27-1 chloride, reactions , Isobutyl chloroformate 573-11-5, 2,3,4-Trimethoxybenzoic acid 610-02-6, 2,3,4-Trihydroxybenzoic acid 1122-58-3, 4-Dimethylaminopyridine 10294-33-4, Boron tribromide 25952-53-8, 1-Ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride 28675-03-8, Dimethylaminoaniline RL: RCT (Reactant); RACT (Reactant or reagent) (synthesis of hydroxybenzamide derivs. as Vacuolar ATPase inhibitors) IT 180206-31-9P 180206-32-0P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (synthesis of hydroxybenzamide derivs. as Vacuolar ATPase inhibitors) ANSWER 7 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN L5 69589-68-0 REGISTRY RN Entered STN: 16 Nov 1984 ED Benzamide, 2-(benzoylamino)-N-2-pyrimidinyl- (9CI) (CA INDEX NAME) CN 3D CONCORD FS MF C18 H14 N4 O2 BEILSTEIN*, CA, CAPLUS, CASREACT STN Files:

(*File contains numerically searchable property data)

DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)

Ring System Data

| Elemental
Analysis | Elemental
Sequence | Size of the Rings | Ring System
Formula | Ring
Identifier | |
|-----------------------|-----------------------|-------------------|------------------------|-------------------------|-------|
| EA | ES | SZ | RF | RID | Count |
| C6
C4N2 | C6
 NCNC3 | , | | 46.150.18
 46.195.39 | |

Predicted Properties (PPROP)

| PROPERTY (CODE) | VALUE | CONDITION | NOTE |
|-------------------------------|--|---------------------------------|---------------|
| | +===================================== | : | +====
 (1) |
| Bioconc. Factor (BCF) | 29.12 | ! | (1) |
| Bioconc. Factor (BCF) | 38.52
39.80 | pH 2 25 deg C
 pH 3 25 deg C | (1) |
| Bioconc. Factor (BCF) | 39.80 | pH 3 25 deg C
 pH 4 25 deg C | (1) |
| Bioconc. Factor (BCF) | 39.95 | pH 5 25 deg C | (1) |
| Bioconc. Factor (BCF) | 39.95 | pH 6 25 deg C | (1) |
| Bioconc. Factor (BCF) | ! | ph 0 25 deg C | (1) |
| Bioconc. Factor (BCF) | 39.94 | ! - | (1) |
| Bioconc. Factor (BCF) | 39.81 | : - | (1) |
| Bioconc. Factor (BCF) | 38.59 | <u> </u> | ! ' ' |
| Bioconc. Factor (BCF) | 29.56 | pH 10 25 deg C | (1) |
| Density (DEN) | 1.362+/-0.06 g/cm**3 | 760 Torr | (1)
 (1) |
| Freely Rotatable Bonds (FRB) | 3 | | |
| H acceptors (HAC) | 6 | | (1) |
| H donors (HD) | 2 | | (1) |
| Hydrogen Donors/Acceptors Sum | ļ ⁸ | | (1) |
| (HDAS) | | , , , os 3 g | /-> |
| Koc (KOC) | 355.13 | pH 1 25 deg C | (1) |
| Koc (KOC) | 469.73 | pH 2 25 deg C | (1) |
| Koc (KOC) | 485.40 | pH 3 25 deg C | (1) |
| Koc (KOC) | 487.02 | pH 4 25 deg C | (1) |
| Koc (KOC) | 487.18 | pH 5 25 deg C | (1) |
| Koc (KOC) | 487.18 | рн 6 25 deg C | (1) |
| Koc (KOC) | 487.03 | pH 7 25 deg C | (1) |
| Koc (KOC) | 485.49 | рн 8 25 deg C | (1) |
| Koc (KOC) | 470.63 | рн 9 25 deg C | (1) |
| Koc (KOC) | 360.54 | рн 10 25 deg C | (1) |
| logD (LOGD) | 2.27 | pH 1 25 deg C | (1) |
| logD (LOGD) | 2.39 | рн 2 25 deg C | (1) |
| logD (LOGD) | 2.41 | рн 3 25 deg C | (1) |
| logD (LOGD) | 2.41 | pH 4 25 deg C | (1) |
| logD (LOGD) | 2.41 | рн 5 25 deg C | (1) |
| logD (LOGD) | 2.41 | pH 6 25 deg C | (1) |
| logD (LOGD) | 2.41 | рн 7 25 deg C | (1) |
| logD (LOGD) | 2.41 | рн 8 25 deg C | (1) |
| logD (LOGD) | 2.39 | pH 9 25 deg C | (1) |
| logD (LOGD) | 2.28 | рн 10 25 deg C | (1) |
| logP (LOGP) | 2.410+/-0.630 | 25 deg C | (1) |

| (ISLB.MASS) | i | ĺ | ĺ |
|----------------------------|-----------------------|------------------|-----|
| Mass Solubility (SLB.MASS) | 0.028 g/L | pH 1 25 deg C | (1) |
| Mass Solubility (SLB.MASS) | | | (1) |
| Mass Solubility (SLB.MASS) | 0.020 g/L | | (1) |
| Mass Solubility (SLB.MASS) | | | (1) |
| Mass Solubility (SLB.MASS) | 0.020 g/L | | (1) |
| Mass Solubility (SLB.MASS) | | | (1) |
| Mass Solubility (SLB.MASS) | | | (1) |
| Mass Solubility (SLB.MASS) | | | (1) |
| Mass Solubility (SLB.MASS) | | | (1) |
| Mass Solubility (SLB.MASS) | | | (1) |
| Mass Solubility (SLB.MASS) | | Unbuffered Water | |
| abb bolubility (bib) | , , , , , | рН 6.96 | \-' |
| | Í | 25 deg C | |
| Molar Intrinsic Solubility | 0.000064 mol/L | 25 deg C | (1) |
| (ISLB.MOL) | ĺ | i i | |
| Molar Solubility (SLB.MOL) | 0.000088 mol/L | pH 1 25 deg C | (1) |
| Molar Solubility (SLB.MOL) | | pH 2 25 deg C | (1) |
| Molar Solubility (SLB.MOL) | | pH 3 25 deg C | (1) |
| Molar Solubility (SLB.MOL) | 0.000064 mol/L | pH 4 25 deg C | (1) |
| Molar Solubility (SLB.MOL) | | pH 5 25 deg C | (1) |
| Molar Solubility (SLB.MOL) | | pH 6 25 deg C | (1) |
| Molar Solubility (SLB.MOL) | 0.000064 mol/L | pH 7 25 deg C | (1) |
| Molar Solubility (SLB.MOL) | 0.000064 mol/L | pH 8 25 deg C | (1) |
| Molar Solubility (SLB.MOL) | 0.000066 mol/L | pH 9 25 deg C | (1) |
| Molar Solubility (SLB.MOL) | 0.000086 mol/L | pH 10 25 deg C | (1) |
| Molar Solubility (SLB.MOL) | 0.000064 mol/L | Unbuffered Water | (1) |
| | 1 | pH 6.96 | ļ |
| | | 25 deg C | ļ |
| Molar Volume (MVOL) | 233.6+/-3.0 cm**3/mol | | (1) |
| | | 760 Torr | |
| Molecular Weight (MW) | 318.33 | | (1) |
| pKa (PKA) | 10.45+/-0.70 | Most Acidic | (1) |
| | | 25 deg C | |
| pKa (PKA) | 0.57+/-0.33 | Most Basic | (1) |
| | | 25 deg C | |
| Polar Surface Area (PSA) | 83.98 A**2 | ļ. | (1) |
| | | | |

|0.020 g/L

25 deg C

(1)

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.14 ((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

AN

CC

90:121516 CA

Section cross-reference(s): 25

Mass Intrinsic Solubility

```
Condensation of acetanthranil and phenylanthranil with certain
ΤI
     aminoheterocycles. Attempted preparation of some 2,3-disubstituted
     4(3H)-quinazolinones
ΑU
     El-Zanfally, S.
     Fac. Pharm., Cairo Univ., Cairo, Egypt
CS
     Egyptian Journal of Pharmaceutical Sciences (1978), Volume Date 1976,
SO
     17(1), 29-34
     CODEN: EJPSBZ; ISSN: 0301-5068
DT
     Journal
LA
     English
```

28-14 (Heterocyclic Compounds (More Than One Hetero Atom))

GI

```
R<sup>1</sup> X R I
```

L7

0 S L1

FILE 'CAPLUS' ENTERED AT 14:39:40 ON 14 FEB 2006

```
Treating 2-methyl-4H-3,1-benzoxazin-4-ones (I; X = O; R = Me; R1 = H, Br)
AΒ
     with amines R2NH2 (R2 = 2-pyridyl, 4-antipyrinyl) yielded 35-81% the
     corresponding quinazolinones (I; X = NR2). The reactions were carried out
     by fusing the reactants at 150-60° for 3 h or by refluxing in
     pyridine-dioxane for 2 h. Similar reaction of I (X = O, R = Ph, R1 = H)
     with R2NH2 (R2 = 2-, 3-, or 4-pyridyl; 2-pyrimidinyl, or 4-antipyrinyl)
     gave o-R2NHCOC6H4NHCOPh.
     quinazolinone methyl; benzoxazinone methyl condensation pyridylamine;
ST
     antipyrinylamine condensation benzoxazinone
TT
     109-12-6
                462-08-8
                           504-24-5
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (condensation of, with 2-phenyl-3,1-benzoxazin-4-one)
IT
     83-07-8
               504-29-0
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (condensation of, with 3,1-benzoxazin-4-one)
IT
     19165-25-4
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (condensation of, with antipyrinylamine)
IT
     525-76-8
                1022-46-4
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (condensation of, with pyridyl- or antipyrinylamine)
TT
     890-03-9P
                 1898-05-1P
                              69589-64-6P
                                             69589-65-7P
                                                           69589-66-8P
     69589-67-9P
                   69589-68-0P
                                69608-79-3P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
=> d his
     (FILE 'HOME' ENTERED AT 14:36:32 ON 14 FEB 2006)
     FILE 'REGISTRY' ENTERED AT 14:37:27 ON 14 FEB 2006
L1
                STRUCTURE UPLOADED
L2
              0 S L1
     FILE 'CAPLUS' ENTERED AT 14:38:12 ON 14 FEB 2006
                S L1
     FILE 'REGISTRY' ENTERED AT 14:38:17 ON 14 FEB 2006
              0 S L1
L3
     FILE 'CAPLUS' ENTERED AT 14:38:17 ON 14 FEB 2006
              0 S L3
L4
                S L1
     FILE 'REGISTRY' ENTERED AT 14:38:44 ON 14 FEB 2006
              7 S L1 FULL
1.5
     FILE 'CAPLUS' ENTERED AT 14:38:50 ON 14 FEB 2006
              5 S L5 FULL
L6
     FILE 'REGISTRY' ENTERED AT 14:39:15 ON 14 FEB 2006
     FILE 'CAPLUS' ENTERED AT 14:39:17 ON 14 FEB 2006
                S L1 FULL 2
     FILE 'REGISTRY' ENTERED AT 14:39:39 ON 14 FEB 2006
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FILE 'REGISTRY' ENTERED AT 14:40:42 ON 14 FEB 2006

FILE 'CAPLUS' ENTERED AT 14:40:54 ON 14 FEB 2006

FILE 'REGISTRY' ENTERED AT 14:41:09 ON 14 FEB 2006

FILE 'CAPLUS' ENTERED AT 14:41:13 ON 14 FEB 2006

=> logoff

ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF

LOGOFF? (Y)/N/HOLD:h COST IN U.S. DOLLARS

SINCE FILE TOTAL

ENTRY

FULL ESTIMATED COST

SESSION 0.46 236.75

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

TOTAL SINCE FILE

ENTRY

SESSION

CA SUBSCRIBER PRICE

-4.97 0.00

SESSION WILL BE HELD FOR 60 MINUTES STN INTERNATIONAL SESSION SUSPENDED AT 14:41:32 ON 14 FEB 2006 Connection closed by remote host

G1:0.N

G2:0,[*1],[*2]

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:Atom 11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 17:CLASS 18:CLASS 19:CLASS 20:Atom 21:Atom 22:CLASS

L1 STRUCTURE UPLOADED

=> s l1 sub sam
ENTER SUBSET L# OR (END):l1
L1 MAY NOT BE USED HERE
The L-number must have been created by a search in this file. To see all L-numbers defined in this session, enter DISPLAY HISTORY at an arrow prompt (=>). For additional information on subset searching in this file, enter HELP SUBSET.
ENTER SUBSET L# OR (END):end
SEARCH ENDED BY USER

=> s 11

SAMPLE SEARCH INITIATED 14:10:54 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 18 TO ITERATE

100.0% PROCESSED 18 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
PROJECTED ITERATIONS: 106 TO 614
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> file caplus

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION 0.88 1.09

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http://www.cas.org/infopolicy.html

=> s 11 sam

REG1stRY INITIATED

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SAMPLE SEARCH INITIATED 14:11:39 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 18 TO ITERATE

100.0% PROCESSED 18 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 106 TO 614
PROJECTED ANSWERS: 0 TO 0

L3 0 SEA SSS SAM L1

L4 0 L3

=> s l1 REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 14:12:03 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 18 TO ITERATE

100.0% PROCESSED 18 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 106 TO 614
PROJECTED ANSWERS: 0 TO 0

L5 0 SEA SSS SAM L1

L6 0 L5

=> s l1 full
 REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 14:12:25 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 340 TO ITERATE

100.0% PROCESSED 340 ITERATIONS 7 ANSWERS

SEARCH TIME: 00.00.01

L7 7 SEA SSS FUL L1

L8

```
AN
     2000:457059 CAPLUS
DN
     133:89437
     Preparation of heteroaryl-substituted aromatic amides as factor Xa
TI
     inhibitors
     Beight, Douglas Wade; Craft, Trelia Joyce; Denny, Carl Penman;
IN
     Franciskovich, Jeffry Bernard; Goodson, Theodore, Jr.; Hall, Steven
     Edward; Herron, David Kent; Joseph, Sajan Pariyadan; Klimkowski, Valentine
     Joseph; Masters, John Joseph; Mendel, David; Milot, Guy; Pineiro-Nunez,
     Marta Maria; Sawyer, Jason Scott; Shuman, Robert Theodore; Smith, Gerald
     Floyd; Tebbe, Anne Louise; Tinsley, Jennifer Marie; Weir, Leonard Crayton;
     Wikel, James Howard; Wiley, Michael Robert; Yee, Ying Kwong
PA
     Eli Lilly and Co., USA; Kyle, Jeffrey, Alan; et al.
SO
     PCT Int. Appl., 403 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
                                                                 DATE
     PATENT NO.
                       KIND
                               DATE
                                          APPLICATION NO.
                                           ______
                                                                  -----
     -----
                        ----
                        A1 20000706 WO 1999-US29946 19991215
PΙ
     WO 2000039118
        W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
            MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
            DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                         CA 1999-2361149
                         AA 20000706
     CA 2361149
                                                                  19991215
                               20011010
                                          EP 1999-964279
    EP 1140903
                         A1
                                                                  19991215
     EP 1140903
                         Bl
                               20040804
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
                               20021008
                                          JP 2000-591029
                        T2
     JP 2002533454
                                                                  19991215
                         E
                                           AT 1999-964279
     AT 272633
                               20040815
                                                                  19991215
                        T3
                             20050316
                                          ES 1999-964279
     ES 2226485
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    ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
T.R
                        2000:457059 CAPLUS
ACCESSION NUMBER:
DOCUMENT NUMBER:
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ENTRY DATE:
                        Entered STN: 07 Jul 2000
                        Preparation of heteroaryl-substituted aromatic amides
TITLE:
                        as factor Xa inhibitors
                        Beight, Douglas Wade; Craft, Trelia Joyce; Denny, Carl
INVENTOR(S):
                        Penman; Franciskovich, Jeffry Bernard; Goodson,
                        Theodore, Jr.; Hall, Steven Edward; Herron, David
                        Kent; Joseph, Sajan Pariyadan; Klimkowski, Valentine
                        Joseph; Masters, John Joseph; Mendel, David; Milot,
                        Guy; Pineiro-Nunez, Marta Maria; Sawyer, Jason Scott;
                        Shuman, Robert Theodore; Smith, Gerald Floyd; Tebbe,
                        Anne Louise; Tinsley, Jennifer Marie; Weir, Leonard
                        Crayton; Wikel, James Howard; Wiley, Michael Robert;
                        Yee, Ying Kwong
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ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

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Eli Lilly and Co., USA; Kyle, Jeffrey, Alan; et al.
PATENT ASSIGNEE(S):
                        PCT Int. Appl., 403 pp.
SOURCE:
                        CODEN: PIXXD2
DOCUMENT TYPE:
                        Patent
                        English
LANGUAGE:
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       SECONDARY:
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CLASSIFICATION:
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MARPAT 133:89437
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OTHER SOURCE(S): GRAPHIC IMAGE:

reagent); USES (Uses)

ABSTRACT:

The title compds. [I; A3-A6, together with the two carbons to which they are attached, complete a substituted benzene in which A3 = CR3, A4 = CR4, A5 = CR5, and A6 = CR6 (wherein R3 = H, Me, MeO, etc.; one of R4 and R5 = H, alkyl, halo, etc.; the other of R4 and R5 = H; R6 = H, Me, F, etc.); L1 = CONH; Q1 = 2-pyridinyl (un)substituted at the 5-position, 3-pyridinyl (un)substituted at the 6-position, 2-pyrimidinyl (un)substituted at the 5-position, etc.; R2 = L2Q2 (L2 = NHCO, NHCH2, OCH2, etc.; Q2 = (un)substituted piperidinyl, piperazinyl, Ph, etc.)] and their pharmaceutically acceptable salts, useful as inhibitors of factor Xa (no data), were prepared and formulated. E.g., a multi-step synthesis of II.HCl was given. In general, compds. I are effective at 0.01-1000 mg/kg/day.

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arom amide heteroaryl prepn formulation factor Xa inhibitor
SUPPL. TERM:
                   anticoagulant
INDEX TERM:
                   Anticoagulants
                      (preparation of heteroaryl-substituted aromatic amides as factor
                      Xa inhibitors)
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(preparation of heteroaryl-substituted aromatic amides as factor Xa inhibitors)

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INDEX TERM:

INDEX TERM:

INDEX TERM:

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ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP
(Preparation); RACT (Reactant or reagent)
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INDEX TERM:

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(preparation of heteroaryl-substituted aromatic amides as factor
Xa inhibitors)
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INDEX TERM:

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ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(preparation of heteroaryl-substituted aromatic amides as factor Xa inhibitors)

REFERENCE COUNT:

REFERENCE(S):

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD.

- (1) Beight Douglas Wade; WO 9900121 A 1999 CAPLUS
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- (3) Berlex Lab; WO 9628427 A 1996 CAPLUS
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ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN L8

ACCESSION NUMBER: 2000:457059 CAPLUS

DOCUMENT NUMBER: 133:89437

Preparation of heteroaryl-substituted aromatic amides TITLE:

as factor Xa inhibitors

Beight, Douglas Wade; Craft, Trelia Joyce; Denny, Carl INVENTOR(S):

Penman; Franciskovich, Jeffry Bernard; Goodson, Theodore, Jr.; Hall, Steven Edward; Herron, David Kent; Joseph, Sajan Pariyadan; Klimkowski, Valentine Joseph; Masters, John Joseph; Mendel, David; Milot, Guy; Pineiro-Nunez, Marta Maria; Sawyer, Jason Scott; Shuman, Robert Theodore; Smith, Gerald Floyd; Tebbe, Anne Louise; Tinsley, Jennifer Marie; Weir, Leonard Crayton; Wikel, James Howard; Wiley, Michael Robert;

Yee, Ying Kwong

Eli Lilly and Co., USA; Kyle, Jeffrey, Alan; et al. PATENT ASSIGNEE(S):

SOURCE: PCT Int. Appl., 403 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

LANGUAGE:

PRIO

Patent English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PAT | CENT | NO. | | | KIN | | DATE | | | APPI | JICAT | ION 1 | NO. | | D | ATE | |
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WO 1999-US29946 US 2001-857751 W 19991215 A3 20010608

OTHER SOURCE(S):

MARPAT 133:89437

The title compds. [I; A3-A6, together with the two carbons to which they AB are attached, complete a substituted benzene in which A3 = CR3, A4 = CR4, A5 = CR5, and A6 = CR6 (wherein R3 = H, Me, MeO, etc.; one of R4 and R5 =H, alkyl, halo, etc.; the other of R4 and R5 = H; R6 = H, Me, F, etc.); L1 = CONH; Q1 = 2-pyridinyl (un) substituted at the 5-position, 3-pyridinyl (un) substituted at the 6-position, 2-pyrimidinyl (un) substituted at the 5-position, etc.; R2 = L2Q2 (L2 = NHCO, NHCH2, OCH2, etc.; <math>Q2 =(un) substituted piperidinyl, piperazinyl, Ph, etc.)] and their pharmaceutically acceptable salts, useful as inhibitors of factor Xa (no data), were prepared and formulated. E.g., a multi-step synthesis of II.HCl was given. In general, compds. I are effective at 0.01-1000 mg/kg/day. REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L3

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L8 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2000:457059 CAPLUS

DOCUMENT NUMBER:

133:89437

TITLE: Preparation of heteroaryl-substituted aromatic amides

as factor Xa inhibitors

INVENTOR(S):

Beight, Douglas Wade; Craft, Trelia Joyce; Denny, Carl Penman; Franciskovich, Jeffry Bernard; Goodson, Theodore, Jr.; Hall, Steven Edward; Herron, David Kent; Joseph, Sajan Pariyadan; Klimkowski, Valentine Joseph; Masters, John Joseph; Mendel, David; Milot, Guy; Pineiro-Nunez, Marta Maria; Sawyer, Jason Scott; Shuman, Robert Theodore; Smith, Gerald Floyd; Tebbe, Anne Louise; Tinsley, Jennifer Marie; Weir, Leonard Crayton; Wikel, James Howard; Wiley, Michael Robert; Yee, Ying Kwong

PATENT ASSIGNEE(S): SOURCE:

Eli Lilly and Co., USA; Kyle, Jeffrey, Alan; et al.

PCT Int. Appl., 403 pp.

CODEN: PIXXD2

DOCUMENT TYPE: LANGUAGE:

Patent English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

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| PRIORITY | APPLN. INFO.: | | | US 1998-113556P | P 19981223 | | |
| | | | | WO 1999-US29946 | W 19991215 | | |
| | | | | US 2001-857751 | A3 20010608 | | |

OTHER SOURCE(S):

MARPAT 133:89437

I

The title compds. [I; A3-A6, together with the two carbons to which they are attached, complete a substituted benzene in which A3 = CR3, A4 = CR4, A5 = CR5, and A6 = CR6 (wherein R3 = H, Me, MeO, etc.; one of R4 and R5 = H, alkyl, halo, etc.; the other of R4 and R5 = H; R6 = H, Me, F, etc.); L1 = CONH; Q1 = 2-pyridinyl (un)substituted at the 5-position, 3-pyridinyl (un)substituted at the 6-position, 2-pyrimidinyl (un)substituted at the 5-position, etc.; R2 = L2Q2 (L2 = NHCO, NHCH2, OCH2, etc.; Q2 = (un)substituted piperidinyl, piperazinyl, Ph, etc.)] and their pharmaceutically acceptable salts, useful as inhibitors of factor Xa (no data), were prepared and formulated. E.g., a multi-step synthesis of II.HCl was given. In general, compds. I are effective at 0.01-1000 mg/kg/day.

II

CALC

PROP

6

```
=> 1
1 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
=> d his
     (FILE 'HOME' ENTERED AT 14:09:38 ON 14 FEB 2006)
     FILE 'REGISTRY' ENTERED AT 14:09:53 ON 14 FEB 2006
                STRUCTURE UPLOADED
L1
L2
              0 S L1
     FILE 'CAPLUS' ENTERED AT 14:11:14 ON 14 FEB 2006
                S L1
     FILE 'REGISTRY' ENTERED AT 14:11:39 ON 14 FEB 2006
              0 S L1 SAM
L3
     FILE 'CAPLUS' ENTERED AT 14:11:39 ON 14 FEB 2006
              0 S L3 SAM
L4
                S L1
     FILE 'REGISTRY' ENTERED AT 14:12:03 ON 14 FEB 2006
L_5
              0 S L1
     FILE 'CAPLUS' ENTERED AT 14:12:03 ON 14 FEB 2006
              0 S L5
L6
                S L1
     FILE 'REGISTRY' ENTERED AT 14:12:25 ON 14 FEB 2006
L7
              7 S L1 FULL
     FILE 'CAPLUS' ENTERED AT 14:12:26 ON 14 FEB 2006
              5 S L7 FULL
L8
=> d 17 ibib abs 1-7
YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:y
'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
'ABS' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
The following are valid formats:
Substance information can be displayed by requesting individual
fields or predefined formats. The predefined substance formats
are: (RN = CAS Registry Number)
REG
      - RN
SAM
      - Index Name, MF, and structure - no RN
FIDE
      - All substance data, except sequence data
       - FIDE, but only 50 names
IDE
SQIDE - IDE, plus sequence data
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
      - Protein sequence data, includes RN
SQD
SQD3
       - Same as SQD, but 3-letter amino acid codes are used
      - Protein sequence name information, includes RN
SQN
```

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats

- Table of calculated properties EPROP - Table of experimental properties

- EPROP and CALC

must be cited first. The CA File predefined formats are: ABS -- Abstract APPS -- Application and Priority Information BIB -- CA Accession Number, plus Bibliographic Data CAN -- CA Accession Number CBIB -- CA Accession Number, plus Bibliographic Data (compressed) IND -- Index Data -- International Patent Classification IPC PATS -- PI, SO STD -- BIB, IPC, and NCL IABS -- ABS, indented, with text labels IBIB -- BIB, indented, with text labels ISTD -- STD format, indented OBIB ----- AN, plus Bibliographic Data (original) OIBIB ----- OBIB, indented with text labels SBIB ----- BIB, no citations SIBIB ----- IBIB, no citations The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available. The MAX format is the same as ALL. The IALL format is the same as ALL with BIB ABS and IND indented, with text labels. For additional information, please consult the following help messages: HELP DFIELDS -- To see a complete list of individual display fields. HELP FORMATS -- To see detailed descriptions of the predefined formats. ENTER DISPLAY FORMAT (IDE):ide ANSWER 1 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN L7 856975-07-0 REGISTRY RN ED Entered STN: 26 Jul 2005 Pyrimidine, 2-[2-(benzyloxy)-4-nitrobenzamido]-4,6-dimethyl- (5CI) CN INDEX NAME) 3D CONCORD FS MF C20 H18 N4 O4 CAS EARLY REGISTRATIONS SR CA, CAPLUS LC STN Files: Ph-CH2-0 Me

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

```
ANSWER 2 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN
L7
     349622-99-7 REGISTRY
RN
ED
     Entered STN: 01 Aug 2001
```

Benzamide, 2-(acetylamino)-N-(4,6-dimethyl-2-pyrimidinyl)- (9CI) (CA CNINDEX NAME) FS 3D CONCORD

MF C15 H16 N4 O2

SR Chemical Library Supplier: MicroChemistry Ltd.

LC STN Files: CHEMCATS

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L7 ANSWER 3 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 280768-70-9 REGISTRY

ED Entered STN: 27 Jul 2000

CN 4-Piperidinecarboxamide, N-[2-[[(5-chloro-2-pyrimidinyl)amino]carbonyl]phe

nyl]-1-(4-pyridinyl)- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C22 H21 Cl N6 O2

SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L7 ANSWER 4 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 267891-53-2 REGISTRY

ED Entered STN: 02 Jun 2000

CN Benzamide, N-(5-chloro-2-quinazolinyl)-2-[(4-pyridinylmethyl)amino]- (9CI)

(CA INDEX NAME)

FS 3D CONCORD

MF C21 H16 Cl N5 O

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L7 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 267891-24-7 REGISTRY

ED Entered STN: 02 Jun 2000

CN Benzamide, N-(5-chloro-2-pyrimidinyl)-2-[(4-pyridinylmethyl)amino]- (9CI)

(CA INDEX NAME)

FS 3D CONCORD

MF C17 H14 C1 N5 O

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L7 ANSWER 6 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 180206-29-5 REGISTRY

ED Entered STN: 29 Aug 1996

CN Benzamide, 2,3,4-tris(phenylmethoxy)-N-2-pyrimidinyl- (9CI) (CA INDEX

NAME)

FS 3D CONCORD

MF C32 H27 N3 O4

SR CA

LC STN Files: CA, CAPLUS

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L7 ANSWER 7 OF 7 REGISTRY COPYRIGHT 2006 ACS on STN

RN 69589-68-0 REGISTRY

ED Entered STN: 16 Nov 1984

CN Benzamide, 2-(benzoylamino)-N-2-pyrimidinyl- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C18 H14 N4 O2

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT

(*File contains numerically searchable property data)

=> d 16 hitstr ibib abs 1-7

L6 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

IT 280768-70-9P

RN

CN

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of heteroaryl-substituted aromatic amides as factor Xa inhibitors)

280768-70-9 CAPLUS

4-Piperidinecarboxamide, N-[2-[[(5-chloro-2-pyrimidinyl)amino]carbonyl]phe nyl]-1-(4-pyridinyl)- (9CI) (CA INDEX NAME)

ACCESSION NUMBER: 2000:457059 CAPLUS

DOCUMENT NUMBER: 133:89437

TITLE: Preparation of heteroaryl-substituted aromatic amides

as factor Xa inhibitors

INVENTOR(S): Beight, Douglas Wade; Craft, Trelia Joyce; Denny, Carl

Penman; Franciskovich, Jeffry Bernard; Goodson, Theodore, Jr.; Hall, Steven Edward; Herron, David Kent; Joseph, Sajan Pariyadan; Klimkowski, Valentine Joseph; Masters, John Joseph; Mendel, David; Milot, Guy; Pineiro-Nunez, Marta Maria; Sawyer, Jason Scott; Shuman, Robert Theodore; Smith, Gerald Floyd; Tebbe, Anne Louise; Tinsley, Jennifer Marie; Weir, Leonard Crayton; Wikel, James Howard; Wiley, Michael Robert;

Yee, Ying Kwong

PATENT ASSIGNEE(S): Eli Lilly and Co., USA; Kyle, Jeffrey, Alan; et al.

SOURCE: PCT Int. Appl., 403 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PA' | TENT | NO. | | | KIND DATE | | | | | | | | DATE | | | | | | |
|---------------|------|------|-----|-----|-----------|------|-------------------------|------|-----------------|----------------|------|------|--------------|----------|----------|------|-----|--|--|
| | | | | | - | | | | | | | | | | | | | | |
| WO 2000039118 | | | | | | | 20000706 | | WO 1999-US29946 | | | | | | 19991215 | | | | |
| | W: | ΑE, | AL, | AM, | ΑT, | AU, | ΑZ, | BA, | BB, | BG, | BR, | BY, | CA, | CH, | CN, | CR, | CU, | | |
| | | CZ, | DE, | DK, | DM, | EE, | ES, | FI, | GB, | GD, | GE, | GH, | GM, | HR, | ΗU, | ID, | IL, | | |
| | | IN, | IS, | JP, | KE, | KG, | KP, | KR, | ΚZ, | LC, | LK, | LR, | LS, | LT, | LU, | LV, | MA, | | |
| | | MD, | MG, | MK, | MN, | MW, | MX, | NO, | NZ, | PL, | PT, | RO, | RU, | SD, | SE, | SG, | SI, | | |
| | | SK, | SL, | TJ, | TM, | TR, | TT, | TZ, | UA, | UG, | US, | UZ, | VN, | YU, | ZA, | zw | | | |
| | RW: | GH, | GM, | KE, | LS, | MW, | SD, | SL, | SZ, | TZ, | ŪĠ, | ZW, | AT, | BE, | CH, | CY, | DE, | | |
| | | DK, | ES, | FI, | FR, | GB, | GR, | IE, | IT, | LU, | MC, | NL, | PT, | SE, | BF, | ВJ, | CF, | | |
| | | CG, | CI, | CM, | GΑ, | GN, | GW, | ML, | MR, | NE, | SN, | TD, | TG | | | | | | |
| CA 2361149 | | | | | AA | | 20000706 CA 1999-236114 | | | | 149 | | 19991215 | | | | | | |
| | | | | | | | 20011010 EP 1999-96 | | | | | 9642 | 279 19991215 | | | | | | |
| ΕP | 1140 | 903 | | | B1 | | 2004 | 0804 | | | | | | | | | | | |
| | | | | | | | ES, | | | GR, | IT, | LI, | LU, | NL, | SE, | MC, | PT, | | |
| | | IE, | SI, | LT, | LV, | FI, | RO | | | | | | | | | | | | |
| JP | 2002 | 5334 | 54 | | T2 | | 2002 | 1008 | JP 2000-591029 | | | | | | 19991215 | | | | |
| ΑT | 2726 | 33 | | | E | | 2004 | 0815 | | AT 1999-964279 | | | | | 19991215 | | | | |
| ES | 2226 | 485 | | | Т3 | | 2005 | 0316 | | ES 1999-964279 | | 79 | | 19991215 | | | | | |
| US 6635657 | | | | В1 | | 2003 | 1021 | | US 2001-857751 | | 51 | | 20010608 | | | | | | |
| US 2004029874 | | | A1 | | 2004 | 0212 | | US 2 | 003- | 6297 | 60 | | 2 | 0030 | 729 | | | | |
| | 6759 | | | | B2 | | 2004 | | | | | | | | | | | | |
| US | 2005 | 2828 | 62 | | A1 | | 2005 | 1222 | | US 2 | 003- | 6298 | 17 | | 2 | 0030 | 729 | | |
| | | | | | | | | | | | | | | | | | | | |

PRIORITY APPLN. INFO.:

US 1998-113556P WO 1999-US29946 US 2001-857751

II

19981223 W 19991215 A3 20010608

OTHER SOURCE(S):

MARPAT 133:89437

GI

The title compds. [I; A3-A6, together with the two carbons to which they AB are attached, complete a substituted benzene in which A3 = CR3, A4 = CR4, A5 = CR5, and A6 = CR6 (wherein R3 = H, Me, MeO, etc.; one of R4 and R5 =H, alkyl, halo, etc.; the other of R4 and R5 = H; R6 = H, Me, F, etc.); L1 = CONH; Q1 = 2-pyridinyl (un) substituted at the 5-position, 3-pyridinyl (un) substituted at the 6-position, 2-pyrimidinyl (un) substituted at the 5-position, etc.; R2 = L2Q2 (L2 = NHCO, NHCH2, OCH2, etc.; Q2 = (un) substituted piperidinyl, piperazinyl, Ph, etc.)] and their pharmaceutically acceptable salts, useful as inhibitors of factor Xa (no data), were prepared and formulated. E.g., a multi-step synthesis of II.HCl was given. In general, compds. I are effective at 0.01-1000 mg/kg/day. THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS REFERENCE COUNT: 6 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN L6

267891-24-7P 267891-53-2P IT

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of anthranilic acid amides as VEGF receptor inhibitors)

267891-24-7 CAPLUS RN

Benzamide, N-(5-chloro-2-pyrimidinyl)-2-[(4-pyridinylmethyl)amino]- (9CI) CN (CA INDEX NAME)

RN267891-53-2 CAPLUS

Benzamide, N-(5-chloro-2-quinazolinyl)-2-[(4-pyridinylmethyl)amino]- (9CI) CN (CA INDEX NAME)

ACCESSION NUMBER: 2000:335387 CAPLUS

DOCUMENT NUMBER: 132:334364

TITLE: Preparation of anthranilic acid amides as vascular

endothelial growth factor receptor inhibitors.

INVENTOR(S): Huth, Andreas; Seidelmann, Dieter; Thierauch,

Karl-Heinz; Bold, Guido; Manley, Paul William; Furet,

Pascal; Wood, Jeanette Marjorie; Mestan, Jurgen; Bruggen, Jose; Ferrari, Stefano; Kruger, Martin; Ottow, Eckhard; Menrad, Andreas; Schirner, Michael

PATENT ASSIGNEE(S): Schering Aktiengesellschaft, Germany; Novartis

Aktiengesellschaft

PCT Int. Appl., 96 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

SOURCE:

| PATENT NO. | KIND DATE | APPLICATION NO. | DATE | | | | |
|------------------------|-----------------|-------------------------------|---------------|--|--|--|--|
| | | | | | | | |
| | | WO 1999-EP8478 | 19991109 | | | | |
| WO 2000027819 | A3 20000817 | | | | | | |
| | | BB, BG, BR, BY, CA, CH, | | | | | |
| | | GB, GD, GE, GH, GM, HR | | | | | |
| IN, IS, JP, | KE, KG, KP, KR, | KZ, LC, LK, LR, LS, LT, | LU, LV, MA, | | | | |
| MD, MG, MK, | MN, MW, MX, NO, | NZ, PL, PT, RO, RU, SD | , SE, SG, SI, | | | | |
| SK, SL, TJ, | TM, TR, TT, TZ, | UA, UG, US, UZ, VN, YU, | , ZA, ZW, AM, | | | | |
| | KZ, MD, RU, TJ, | | | | | | |
| | | SZ, TZ, UG, ZW, AT, BE | | | | | |
| DK, ES, FI, | FR, GB, GR, IE, | IT, LU, MC, NL, PT, SE | , BF, BJ, CF, | | | | |
| CG, CI, CM, | GA, GN, GW, ML, | MR, NE, SN, TD, TG | | | | | |
| DE 19910396 | A1 20000907 | DE 1999-19910396 | 19990303 | | | | |
| DE 19910396 | C2 20011213 | | | | | | |
| CA 2350208 | AA 20000518 | CA 1999-2350208 | 19991109 | | | | |
| BR 9915553 | A 20010814 | BR 1999-15553 | 19991109 | | | | |
| EP 1129074 | A2 20010905 | EP 1999-953967 | 19991109 | | | | |
| R: AT, BE, CH, | DE, DK, ES, FR, | GB, GR, IT, LI, LU, NL | , SE, MC, PT, | | | | |
| IE, SI, LT, | LV, FI, RO | | | | | | |
| TR 200101307 | T2 20020521 | TR 2001-200101307 | 19991109 | | | | |
| JP 2002529452 | T2 20020910 | JP 2000-580999 | 19991109 | | | | |
| EE 200100258 | A 20021216 | EE 2001-258
NZ 1999-511413 | 19991109 | | | | |
| NZ 511413 | A 20040130 | NZ 1999-511413 | 19991109 | | | | |
| AU 771180 | B2 20040318 | AU 2000-10454 | 19991109 | | | | |
| NO 2001002245 | A 20010710 | NO 2001-2245 | 20010507 | | | | |
| BG 105588 | A 20020430 | BG 2001-105588 | 20010611 | | | | |
| HK 1041882 | A1 20050318 | HK 2002-103628 | 20020514 | | | | |
| PRIORITY APPLN. INFO.: | | GB 1998-24579 | | | | | |
| | | DE 1999-19910396 | A 19990303 | | | | |
| | | WO 1999-EP8478 | w 19991109 | | | | |

OTHER SOURCE(S): MARPAT 132:334364

GI

AB Title compds. [I; A = NR2; W = O, S, H2, NR8; Z = NR10, N, NR10(CH2)q,
 alkyl, etc.; q = 1-6; AZR1 = tetrahydroisoquinolinyl, indazolyl,
 5-chloroindolyl, etc.; R1 = (substituted) aryl, heteroaryl; R2 = H, alkyl;
 R3 = (substituted) mono- or bicyclic aryl, heteroaryl; R4-R7 = H, halo,
 (substituted) alkoxy, alkyl, carboxyalkyl; R5R6 = dioxetanyl; R8, R10 = H,

 alkyl]. Thus, Me N-(4-pyridylmethyl)anthranilate (preparation given) was stirred with Ph(CH2)3NH2 and Me3Al were stirred in PhMe to give N-(3-phenylprop-1-yl)-N2-(4-pyridylmethyl) anthranilamide. The latter inhibited VEGFR I with IC50 = 0.05 μM .

ANSWER 3 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN L6

180206-29-5P

IT

CN

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)

(synthesis of hydroxybenzamide derivs. as Vacuolar ATPase inhibitors)

RN 180206-29-5 CAPLUS

> Benzamide, 2,3,4-tris(phenylmethoxy)-N-2-pyrimidinyl- (9CI) (CA INDEX

1996:513596 CAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 125:167581

Preparation of hydroxybenzamide derivatives as TITLE:

> prevention and treatment agents for bone diseases Nomoto, Takashi; Kawakami, Kumiko; Akagawa, Akiko;

Matsuyama, Kenji; Torigoe, Koichiro

PATENT ASSIGNEE(S): SOURCE:

Banyu Pharma Co Ltd, Japan Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

INVENTOR(S):

LANGUAGE:

Patent Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | | |
|------------------------|--------|------------|-----------------|----------|--|--|
| | | | | | | |
| JP 08143525 | A2 | 19960604 | JP 1994-311235 | 19941121 | | |
| PRIORITY APPLN. INFO.: | | | JP 1994-311235 | 19941121 | | |
| OTHER SOURCE(S) · | MARPAT | 125:167581 | | | | |

OTHER SOURCE(S): GI

CONR2 (CH2) nA

The title bone disease inhibitors contain a compound (I) [R1 = H, halo, OH, AΒ NO2, lower alkyl, lower alkoxy; R2 = H, lower alkyl; n = 0-3; A = aryl, heteroaryl; A and R2 may combine to complete piperidine or tetrahydroisoquinoline ring]. I is an efficient component for prevention and treatment of bone diseases caused by Vacuolar ATPase. Thus, 2,3,4-tribenzyloxybenzoic acid was reacted with aniline in the presence of 4-dimethylaminopyridine and 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide, followed by hydrogenation to give I [R1 = OH; R2 = H; n = 0; A = Ph], 4 μM of which showed Vacuolar ATPase inhibiting activity of 97%.

ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

I

69589-68-0P TT

L6

RL: SPN (Synthetic preparation); PREP (Preparation)

ACCESSION NUMBER: 19

1979:121516 CAPLUS

DOCUMENT NUMBER:

90:121516

TITLE:

Condensation of acetanthranil and phenylanthranil with

certain aminoheterocycles. Attempted preparation of

some 2,3-disubstituted 4(3H)-quinazolinones

AUTHOR (S):

El-Zanfally, S.

CORPORATE SOURCE:

Fac. Pharm., Cairo Univ., Cairo, Egypt

SOURCE:

Egyptian Journal of Pharmaceutical Sciences (1978),

Volume Date 1976, 17(1), 29-34

CODEN: EJPSBZ; ISSN: 0301-5068

DOCUMENT TYPE:

Journal

LANGUAGE:

English

OTHER SOURCE(S):

CASREACT 90:121516

GI

RN

CN

- Treating 2-methyl-4H-3,1-benzoxazin-4-ones (I; X = O; R = Me; R1 = H, Br) with amines R2NH2 (R2 = 2-pyridyl, 4-antipyrinyl) yielded 35-81% the corresponding quinazolinones (I; X = NR2). The reactions were carried out by fusing the reactants at 150-60° for 3 h or by refluxing in pyridine-dioxane for 2 h. Similar reaction of I (X = O, R = Ph, R1 = H) with R2NH2 (R2 = 2-, 3-, or 4-pyridyl; 2-pyrimidinyl, or 4-antipyrinyl) gave o-R2NHCOC6H4NHCOPh.
- L6 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
- IT 856975-07-0, Pyrimidine, 2-[2-(benzyloxy)-4-nitrobenzamido]-4,6-dimethyl-

(preparation of)

- RN 856975-07-0 CAPLUS
- CN Pyrimidine, 2-[2-(benzyloxy)-4-nitrobenzamido]-4,6-dimethyl- (5CI) (CA INDEX NAME)

ACCESSION NUMBER: 1953:22216 CAPLUS

DOCUMENT NUMBER: 47:22216

ORIGINAL REFERENCE NO.: 47:3819d-i,3820a-i

TITLE: Tuberculostatic derivatives of p-aminobenzoic acid.

III. Heterocyclic derivatives of 4-aminosalicylic acid

AUTHOR(S): Jensen, Kai Arne; Ingvorsen, Helmuth

CORPORATE SOURCE: Univ. Copenhagen

SOURCE: Acta Chemica Scandinavica (1952), 6, 161-5

CODEN: ACHSE7; ISSN: 0904-213X

DOCUMENT TYPE: Journal LANGUAGE: English

cf. C.A. 43, 7454i. A number of heterocyclic derivs. of 4-nitro- (I) and 4-aminosalicylic acid (II) were prepared, including 4-nitrosalicylomorpholide (III), m. 247-8°, and -piperidide (IV), m. 230-2°; 4-aminosalicylomorpholide (V), m. 161-2°, and -piperidide (VI), m. 134-5°; 2-benzyloxy-4-nitro-(VII), m. 170° and 4-aminobenzoic acid (VIII), m. 160°; 2-benzyloxy-4-nitrobenzoyl chloride (IX), m. 122°, -benzamide (X), m. 178°, and -benzanilide (XI), m. 201°; 4-amino-salicylanilide (XII), m. 143°; 2-(2-benzyloxy-4'nitrobenzamido) pyridine (XIII), m. 144°, -thiazole (XIV), m. 201° -5-methyl-1,3,4-thiadiazole (XV), m. 196°, and -4,6-dimethylpyrimidine (XVI), m. 206°; and 2-(2-benzyloxy-4aminobenzamido) pyridine (XVII), m. 183°, -thiazole (XVIII), m. 214-15°, and -5-methyl-1,3,4-thiazole (XIX), m. 110-11°. Et 4-nitrosalicylate (3 g.) and 3 g. morpholine (XX) were heated 5 h. at 120°, the excess XX removed at 100° in vacuo, the residue dissolved in hot H2O, acidified with HOAc, and the solution cooled, giving 50% III. IV was similarly prepared III (0.5 g.) hydrogenated with 0.01 g. PtO2 in 25 cc. EtOH, all of the EtOH removed in vacuo, and fractional crystallization of the residue from petr. ether gave 0.2 g.V. VI was similarly prepared I (50 g.), 35 g. PhCH2Cl, and 50 cc. 20% NaOH in 100 cc. EtOH were refluxed until colorless, 0.2 N NaOH added until the color reappeared, the EtOH distilled, H2O added, and dilute HCl added to complete the precipitation of VII (40 g.). VII hydrogenated over PtO2 with the amount of H calculated for reduction of the NO2 gave VIII. VII (10 g.) and 10 cc. SOCl2 were refluxed 1-1.5 h., the excess SOC12 was removed in vacuo, and the IX (9.2 g.) treated with C and recrystd. from C6H6; 2 g. IX and 10 cc. cold, concentrated aqueous NH3 in 30 cc. H2O neutralized with HOAc gave 1.3 g. X (from 90% EtOH). IX (2.9 g.), 1 g. PhNH2, and 5 cc. pyridine were cooled and the mixture poured into 300 cc. H2O, giving 2.2 g. XI (from HOAc). XI hydrogenated in EtOH, the solution filtered, part of the EtOH removed in vacuo, H2O added, the solution heated, charcoal added, and the hot solution filtered gave XII. XIII to XVI were prepared like VII, in 2.2, 2.7, 1.7, and 1.7 g. yields, resp., from 2.9 g. acid chloride. XVII to XIX were obtained by hydrogenation of the corresponding nitro compds. over PtO2 in EtOH. Hydrogenation of the nitro compds. at 100° and 150 atmospheric gave the corresponding azoxy compds.

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ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
L6
     2000:457059 CAPLUS
AN
     133:89437
DN
     Preparation of heteroaryl-substituted aromatic amides as factor Xa
ΤI
     inhibitors
     Beight, Douglas Wade; Craft, Trelia Joyce; Denny, Carl Penman;
IN
     Franciskovich, Jeffry Bernard; Goodson, Theodore, Jr.; Hall, Steven
     Edward; Herron, David Kent; Joseph, Sajan Pariyadan; Klimkowski, Valentine
     Joseph; Masters, John Joseph; Mendel, David; Milot, Guy; Pineiro-Nunez,
     Marta Maria; Sawyer, Jason Scott; Shuman, Robert Theodore; Smith, Gerald
     Floyd; Tebbe, Anne Louise; Tinsley, Jennifer Marie; Weir, Leonard Crayton;
     Wikel, James Howard; Wiley, Michael Robert; Yee, Ying Kwong
     Eli Lilly and Co., USA; Kyle, Jeffrey, Alan; et al.
PA
     PCT Int. Appl., 403 pp.
so
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
                                          APPLICATION NO.
                                                                   DATE
                     KIND DATE
     PATENT NO.
     WO 2000039118 A1 20000706 WO 1999-US29946 19991215
PΙ
         W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
              CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
              MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
         SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
              DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
              CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                             CA 1999-2361149
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                                  20000706
     CA 2361149
                            A1
                                  20011010
                                              EP 1999-964279
                                                                        19991215
     EP 1140903
     EP 1140903
                           B1
                                  20040804
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO
                                  20021008
                                                JP 2000-591029
                                                                        19991215
                           T2
     JP 2002533454
                                  20040815
                                               AT 1999-964279
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     AT 272633
                                             ES 1999-964279
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                           T3
                                  20050316
     ES 2226485
US 6635657 B1
US 2004029874 A1
US 6759414 B2
US 2005282862 A1
PRAI US 1998-113556P P
WO 1999-US29946 W
                                             US 2001-857751
                                                                        20010608
                                  20031021
                                              US 2003-629760
                                                                        20030729
                                  20040212
                                  20040706
                                  20051222
                                             US 2003-629817
                                                                        20030729
                                  19981223
                                  19991215
     US 2001-857751
                           A3
                                  20010608
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RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 16 bib abs hitstr 1-7
YOU HAVE REQUESTED DATA FROM FILE 'CAPLUS' - CONTINUE? (Y)/N:y

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L6 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:457059 CAPLUS
DN 133:89437
TI Preparation of heteroaryl-substituted aromatic amides
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TI Preparation of heteroaryl-substituted aromatic amides as factor Xa inhibitors

IN Beight, Douglas Wade; Craft, Trelia Joyce; Denny, Carl Penman; Franciskovich, Jeffry Bernard; Goodson, Theodore, Jr.; Hall, Steven Edward; Herron, David Kent; Joseph, Sajan Pariyadan; Klimkowski, Valentine Joseph; Masters, John Joseph; Mendel, David; Milot, Guy; Pineiro-Nunez, Marta Maria; Sawyer, Jason Scott; Shuman, Robert Theodore; Smith, Gerald Floyd; Tebbe, Anne Louise; Tinsley, Jennifer Marie; Weir, Leonard Crayton; Wikel, James Howard; Wiley, Michael Robert; Yee, Ying Kwong

PA Eli Lilly and Co., USA; Kyle, Jeffrey, Alan; et al.

SO PCT Int. Appl., 403 pp.

MARPAT 133:89437

CODEN: PIXXD2

| TC | Patent |
|-----|---------|
| LΑ | English |
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RN

CN

| PAN | PATENT NO. | | | | | | | KIND DATE | | | APPLICATION NO. | | | | | | | DATE | | |
|------|------------------------------|----------------------------------|---------------------------------|---------------------------|-----|--------------|-----------------|----------------------|----------------------|----------------|-----------------|----|------|----------|----------|-----|----------|------|-----|--|
| | | | | | | | | | | | | | | | | | | | | |
| PI | WO 2000039118 | | | A1 20000706 | | | | WO 1999-US29946 | | | | | | | 19991215 | | | | | |
| | | W: | ΑE, | AL, | AM, | AT, | AU, | ΑZ, | BA, | BB, | BG | 3, | BR, | BY, | CA, | CH, | CN, | CR, | CU, | |
| | | | CZ, | DE, | DK, | DM, | EE, | ES, | FI, | GB, | GI | Ο, | GE, | GH, | GM, | HR, | HU, | ID, | IL, | |
| | | | IN, | IS, | JP, | KE, | KG, | KP, | KR, | KZ, | LC | Ξ, | LK, | LR, | LS, | LT, | LU, | LV, | MA, | |
| | | | MD, | MG, | MK, | MN, | MW, | MX, | NO, | NZ, | ΡI | ٠, | PT, | RO, | RU, | SD, | SE, | SG, | SI, | |
| | | | SK, | SL, | TJ, | TM, | TR, | TT, | TZ, | UA, | UG | 3, | US, | UZ, | VN, | YU, | ZA, | ZW | | |
| | | RW: | | - | - | | | SD, | | | | | | | | | | | DE, | |
| | | | • | - | - | | | GR, | | | | | | | | | | | | |
| | | | CG, | CI, | CM, | GA, | GN, | GW, | ML, | MR, | NE | Ξ, | SN, | TD, | TG | | | | | |
| | CA 2 | 23611 | - | | | | CA 1999-2361149 | | | | | | | 19991215 | | | | | | |
| | EP : | 11409 | 903 | | | | EP 1999-964279 | | | | | | | | | | | | | |
| | | | | | | B1 20040804 | | | | | | | | | | | | | | |
| | | R: | AT, | BE, | CH, | DE, | DK, | ES, | FR, | GB, | GF | ۲, | IT, | LI, | LU, | NL, | SE, | MC, | PT, | |
| | | | IE, | SI, | LT, | LV, | FI, | RO | | | | | | | | | | | | |
| | JP 2 | 20025 | 334! | 54 | | T2 | | 2002 | 1008 | | JP | 20 | 000- | 5910 | 29 | | 1 | 9991 | 215 | |
| | | 27263 | | | | | | AT 1999-964279 | | | | | | | 19991215 | | | | | |
| | ES 2 | 22264 | 185 | | | Т3 | ES 1999-964279 | | | | | | | 19991215 | | | | | | |
| | US 6 | 66356 | 557 | | | B1 | US 2001-857751 | | | | | | | 20010608 | | | | | | |
| | | 20040 | | | | | | | | US 2003-629760 | | | | | | | 20030729 | | | |
| | US (| 67594 | 114 | | | B2 | 0706 | | | | | | | | | | | | | |
| | US : | 20052 | 2828 | 62 | | A1 | | 2005 | 1222 | | US | 20 | 003- | 6298 | 17 | | 2 | 0030 | 729 | |
| PRAI | | | | | | | | 1998 | 1223 | | | | | | | | | | | |
| | | | | | | | | 1999 | 1215 | | | | | | | | | | | |
| | | 2001- | | | | | | 2001 | 0608 | | | | | | | | | | | |
| os | MAR | PAT I | L33: | 8943 | 7 | | | | | | | | | | | | | | | |
| GI | | | | | | | | | | | | | | | | | | | | |
| | US :
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1999 | 1222
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1215 | | US | 20 | 003- | 6298: | 17 | | 2 | 0030 | 729 | |

The title compds. [I; A3-A6, together with the two carbons to which they are attached, complete a substituted benzene in which A3 = CR3, A4 = CR4, A5 = CR5, and A6 = CR6 (wherein R3 = H, Me, MeO, etc.; one of R4 and R5 = H, alkyl, halo, etc.; the other of R4 and R5 = H; R6 = H, Me, F, etc.); L1 = CONH; Q1 = 2-pyridinyl (un)substituted at the 5-position, 3-pyridinyl (un)substituted at the 6-position, 2-pyrimidinyl (un)substituted at the 5-position, etc.; R2 = L2Q2 (L2 = NHCO, NHCH2, OCH2, etc.; Q2 = (un)substituted piperidinyl, piperazinyl, Ph, etc.)] and their pharmaceutically acceptable salts, useful as inhibitors of factor Xa (no data), were prepared and formulated. E.g., a multi-step synthesis of II.HCl was given. In general, compds. I are effective at 0.01-1000 mg/kg/day.

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of heteroaryl-substituted aromatic amides as factor Xa inhibitors) 280768-70-9 CAPLUS

4-Piperidinecarboxamide, N-[2-[[(5-chloro-2-pyrimidinyl)amino]carbonyl]phe nyl]-1-(4-pyridinyl)- (9CI) (CA INDEX NAME)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:335387 CAPLUS

DN 132:334364

TI Preparation of anthranilic acid amides as vascular endothelial growth factor receptor inhibitors.

IN Huth, Andreas; Seidelmann, Dieter; Thierauch, Karl-Heinz; Bold, Guido; Manley, Paul William; Furet, Pascal; Wood, Jeanette Marjorie; Mestan, Jurgen; Bruggen, Jose; Ferrari, Stefano; Kruger, Martin; Ottow, Eckhard; Menrad, Andreas; Schirner, Michael

PA Schering Aktiengesellschaft, Germany; Novartis Aktiengesellschaft

SO PCT Int. Appl., 96 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 2

GI

| 112(, | PAT | TENT NO. | KINI | DATE | | | APP | LICAT | DATE | | | | | | | | | | |
|-------|----------------------------------|--|---|---|---|--|---|--|-------------------------|--|----------------------------------|--------------------------|---------------------------------|--------------------------|--------------------------|----------------------------------|--|--|--|
| PI | WO | 2000027819
2000027819 | | | A2 20000518 | | | , | | | | | | | | | | | |
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C, DK,
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G, MK,
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| | CA | 2350208 | AA 20000518
A 20010814
A2 20010905 | | | | | CA : | 1999- | | 19991109
19991109
19991109 | | | | | | | | |
| | RR | R: AT, BE, CH,
IE, SI, LT,
200101307
2002529452
200100258
3511413
J 771180 | | | LV, FI, RO T2 20020521 T2 20020910 A 20021216 | | | | | TR 2001-200101307
JP 2000-580999
EE 2001-258
NZ 1999-511413 | | | | | | 19991109
19991109
19991109 | | | |
| | NO
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WO | 2001002245
105588
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1998-24579
1999-199103 | A
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A | | 2001
2002 | 0710
0430
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1110
0303 | | BG | 2001-
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2002- | 2245
1055 | 88 | | 2 | 0010 | 611 | | | | |
| os | MARPAT 132:334364 | | | | | | | | | | | | | | | | | | |

Title compds. [I; A = NR2; W = O, S, H2, NR8; Z = NR10, N, NR10(CH2)q, alkyl, etc.; q = 1-6; AZR1 = tetrahydroisoquinolinyl, indazolyl, 5-chloroindolyl, etc.; R1 = (substituted) aryl, heteroaryl; R2 = H, alkyl; R3 = (substituted) mono- or bicyclic aryl, heteroaryl; R4-R7 = H, halo, (substituted) alkoxy, alkyl, carboxyalkyl; R5R6 = dioxetanyl; R8, R10 = H, alkyl]. Thus, Me N-(4-pyridylmethyl)anthranilate (preparation given) was stirred with Ph(CH2)3NH2 and Me3Al were stirred in PhMe to give N-(3-phenylprop-1-yl)-N2-(4-pyridylmethyl)anthranilamide. The latter inhibited VEGFR I with IC50 = 0.05 μM .

IT 267891-24-7P 267891-53-2P

Ι

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of anthranilic acid amides as VEGF receptor inhibitors)

267891-24-7 CAPLUS

RN

RN

CN Benzamide, N-(5-chloro-2-pyrimidinyl)-2-[(4-pyridinylmethyl)amino]- (9CI) (CA INDEX NAME)

267891-53-2 CAPLUS

CN Benzamide, N-(5-chloro-2-quinazolinyl)-2-[(4-pyridinylmethyl)amino]- (9CI) (CA INDEX NAME)

- L6 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN
- AN 1996:513596 CAPLUS
- DN 125:167581
- TI Preparation of hydroxybenzamide derivatives as prevention and treatment agents for bone diseases
- IN Nomoto, Takashi; Kawakami, Kumiko; Akagawa, Akiko; Matsuyama, Kenji; Torigoe, Koichiro

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PA
    Banyu Pharma Co Ltd, Japan
    Jpn. Kokai Tokkyo Koho, 15 pp.
SO
    CODEN: JKXXAF
DT
    Patent
    Japanese
FAN.CNT 1
                      KIND
                                        APPLICATION NO.
    PATENT NO.
                             DATE
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                       A2
                             19960604
                                        JP 1994-311235
                                                             19941121
    JP 08143525
PΙ
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19941121

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PRAI JP 1994-311235

MARPAT 125:167581

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The title bone disease inhibitors contain a compound (I) [R1 = H, halo, OH, NO2, lower alkyl, lower alkoxy; R2 = H, lower alkyl; n = 0-3; A = aryl, heteroaryl; A and R2 may combine to complete piperidine or tetrahydroisoquinoline ring]. I is an efficient component for prevention and treatment of bone diseases caused by Vacuolar ATPase. Thus, 2,3,4-tribenzyloxybenzoic acid was reacted with aniline in the presence of 4-dimethylaminopyridine and 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide, followed by hydrogenation to give I [R1 = OH; R2 = H; n = 0; A = Ph], 4 µM of which showed Vacuolar ATPase inhibiting activity of 97%.

IT 180206-29-5P

180206-29-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent) (synthesis of hydroxybenzamide derivs. as Vacuolar ATPase inhibitors) 180206-29-5 CAPLUS

RN 180206-29-5 CAPLUS
CN Benzamide, 2,3,4-tris(phenylmethoxy)-N-2-pyrimidinyl- (9CI) (CA INDEX NAME)

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AN 1979:121516 CAPLUS

DN 90:121516

TI Condensation of acetanthranil and phenylanthranil with certain aminoheterocycles. Attempted preparation of some 2,3-disubstituted 4(3H)-quinazolinones

AU El-Zanfally, S.

CS Fac. Pharm., Cairo Univ., Cairo, Egypt

SO Egyptian Journal of Pharmaceutical Sciences (1978). Volume Date 1970
```

ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

SO Egyptian Journal of Pharmaceutical Sciences (1978), Volume Date 1976, 17(1), 29-34

CODEN: EJPSBZ; ISSN: 0301-5068 Journal

LA English
OS CASREACT 90:121516
GI

L6

DT

Treating 2-methyl-4H-3,1-benzoxazin-4-ones (I; X = O; R = Me; R1 = H, Br) with amines R2NH2 (R2 = 2-pyridyl, 4-antipyrinyl) yielded 35-81% the corresponding quinazolinones (I; X = NR2). The reactions were carried out by fusing the reactants at 150-60° for 3 h or by refluxing in pyridine-dioxane for 2 h. Similar reaction of I (X = O, R = Ph, R1 = H) with R2NH2 (R2 = 2-, 3-, or 4-pyridyl; 2-pyrimidinyl, or 4-antipyrinyl) gave o-R2NHCOC6H4NHCOPh.

IT 69589-68-0P

ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

RN 69589-68-0 CAPLUS

CN Benzamide, 2-(benzoylamino)-N-2-pyrimidinyl- (9CI) (CA INDEX NAME)

1953:22216 CAPLUS

47:22216

L6 AN

DN

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OREF 47:3819d-i,3820a-i
    Tuberculostatic derivatives of p-aminobenzoic acid. III. Heterocyclic
TI
    derivatives of 4-aminosalicylic acid
ΑU
    Jensen, Kai Arne; Ingvorsen, Helmuth
CS
    Univ. Copenhagen
SO
    Acta Chemica Scandinavica (1952), 6, 161-5
    CODEN: ACHSE7; ISSN: 0904-213X
    Journal
DT
LΑ
    English
    cf. C.A. 43, 7454i. A number of heterocyclic derivs. of 4-nitro- (I) and
AB
     4-aminosalicylic acid (II) were prepared, including 4-nitro-
     salicylomorpholide (III), m. 247-8°, and -piperidide (IV), m.
     230-2°; 4-aminosalicylomorpholide (V), m. 161-2°, and
     -piperidide (VI), m. 134-5°; 2-benzyloxy-4-nitro-(VII), m.
     170° and 4-aminobenzoic acid (VIII), m. 160°;
     2-benzyloxy-4-nitrobenzoyl chloride (IX), m. 122°, -benzamide (X),
     m. 178°, and -benzanilide (XI), m. 201°;
     4-amino-salicylanilide (XII), m. 143°; 2-(2-benzyloxy-4'-
    nitrobenzamido) pyridine (XIII), m. 144°, -thiazole (XIV), m.
     201° -5-methyl-1,3,4-thiadiazole (XV), m. 196°, and
     -4,6-dimethylpyrimidine (XVI), m. 206°; and 2-(2-benzyloxy-4-
     aminobenzamido) pyridine (XVII), m. 183°, -thiazole (XVIII), m.
     214-15°, and -5-methyl-1,3,4-thiazole (XIX), m. 110-11°. Et
     4-nitrosalicylate (3 g.) and 3 g. morpholine (XX) were heated 5 h. at
     120°, the excess XX removed at 100° in vacuo, the residue
     dissolved in hot H2O, acidified with HOAc, and the solution cooled, giving
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50% III. IV was similarly prepared III (0.5 g.) hydrogenated with 0.01 g. PtO2 in 25 cc. EtOH, all of the EtOH removed in vacuo, and fractional crystallization of the residue from petr. ether gave 0.2 g.V. VI was similarly prepared I (50 g.), 35 g. PhCH2Cl, and 50 cc. 20% NaOH in 100 cc. EtOH were refluxed until colorless, 0.2 N NaOH added until the color reappeared, the EtOH distilled, H2O added, and dilute HCl added to complete the precipitation of VII (40 g.). VII hydrogenated over PtO2 with the amount of H calculated for reduction of the NO2 gave VIII. VII (10 g.) and 10 cc. SOC12 were refluxed 1-1.5 h., the excess SOCl2 was removed in vacuo, and the IX (9.2 g.) treated with C and recrystd. from C6H6; 2 g. IX and 10 cc. cold, concentrated aqueous NH3 in 30 cc. H2O neutralized with HOAc gave 1.3 g. X (from 90% EtOH). IX (2.9 g.), 1 g. PhNH2, and 5 cc. pyridine were cooled and the mixture poured into 300 cc. H2O, giving 2.2 g. XI (from HOAc). XI hydrogenated in EtOH, the solution filtered, part of the EtOH removed in vacuo, H2O added, the solution heated, charcoal added, and the hot solution filtered gave XII. XIII to XVI were prepared like VII, in 2.2, 2.7, 1.7, and 1.7 g. yields, resp., from 2.9 g. acid chloride. XVII to XIX were obtained by hydrogenation of the corresponding nitro compds. over PtO2 in EtOH. Hydrogenation of the nitro compds. at 100° and 150 atmospheric gave the corresponding azoxy compds. 856975-07-0, Pyrimidine, 2-[2-(benzyloxy)-4-nitrobenzamido]-4,6dimethyl-

(preparation of)

IT

CN

RN 856975-07-0 CAPLUS

Pyrimidine, 2-[2-(benzyloxy)-4-nitrobenzamido]-4,6-dimethyl- (5CI) (CA INDEX NAME)